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ART. I.—*The English Encyclopædia: being a Collection of Treatises, and a Dictionary of Terms, illustrative of the Arts and Sciences. Compiled from modern Authors of the first Eminence in the different Branches of Science. The whole illustrated with upwards of four hundred Copper-Plates.* 10 *Vols.* 4*to.* 15*l. Boards.* Kearsley. 1803.

THE late century has been emphatically styled the age of dictionaries; for in it their number has not only increased beyond any former proportion, but their objects and plans have been equally extended. A dictionary, in its *original* sense, is a collection of words arranged alphabetically, subservient to the student of a new language, or the mythology and customs, the geography and biography, of those to whom that language was common. Suidas and Hesychius aimed at no more; and Hoffman, towards the end of the seventeenth century, expanded chiefly the geography, mythology, and ancient history, of the Greeks, Romans, and Jews, from the dictionary of Lloyd. The two Stephani compiled dictionaries of words only; for the medical dictionary of H. Stephanus is confined to the explanation of the language of Hippocrates and Galen, including the similar attempts of Erotian and others. We need not enlarge on the Lexicon of Pitiscus, of Du Cange and his assistant Charpentier, of d'Herbelot, of Calmet, or the very excellent German Encyclopædia of the Bible. If these have extended the bounds of dictionaries, and facilitated the paths of science, they are not connected with our present investigation—the origin of those *encyclopedias*, which include arts and sciences in all their variety—an inquiry we perhaps should not have undertaken, had we been aware of its difficulty and extent; but which having once begun, we shall persevere in, by imparting the result of our labours, perhaps of our *tædium*, to our readers. The dictionary of Mr. Chambers was published in 1728, a work supposed to silence competition, and conceived to be

without an example, or an adequate successor. Such, at least, is the language which has been employed. Mr. Chambers however, with apparent candour, mentions his predecessors; but joins together the good and bad, with little discrimination, as equally trifling and equally useless. In the commencement of this inquiry, we had some thoughts of examining these predecessors; but we were somewhat surprised to find that so much had been achieved, as to leave few sprigs of laurel for the person who completed it.

The great dictionary of the French academy preceded Mr. Chambers's work; but this could give him little assistance, as Mr. Chambers's contains no disquisitions, no engravings, and is confined to an explanation of terms only. Yet these are so numerous, for the period so complete, that his work is admirably calculated to afford a foundation on which any future superstructure may be raised. If the subjects be proposed, numerous will be the authors, which even the slightest inquiry may suggest, who can contribute to an explanation. Furetier's dictionary will scarcely furnish more. Chauvin's 'Lexicon Rationale,' or 'Thesaurus Philosophicus,' is, however, a work of much greater importance. It contains some excellent figures, and a good illustration of philosophy, so far as the ancients were acquainted with the subject; and the mathematical science displayed in it, from the best authors of antiquity, is far from being inconsiderable. The whole is, indeed, contaminated with the jargon of the schools; and, in the earlier editions of Chambers, we perceive many passages in this department of the work copied with a servility somewhat disgraceful. The dictionary of the Jesuits of Trevoux also preceded Mr. Chambers; and to this work he was greatly indebted: but his principal and most valuable assistant was Dr. Harris, author of the 'Lexicon Technicum.' We observe some little jealousy in the compilers of dictionaries; and it is seldom that they give any account of their predecessors. Dr. Harris's name does not occur in Bayle, in the General Dictionary, or even in the 'Biographia Britannica;' yet it is not easy to conceive the reason of this omission in the last instance. Even the authors of the supplement to his work, who are sufficiently jealous of his fame, add no account of his life; and Dr. Hutton does not notice a mathematician and philosopher of no common abilities. We have not been able to examine the first edition of his dictionary; but the second was already published when he had attained the age of forty; and, from incidental information, we find that the first must have appeared soon after 1704; for he apologises for giving a less distinct account of the Newtonian system of light and colours, as the books on this subject were then published so lately, the first edition of the Optics appearing in this very

year. Dr. Harris's dictionary, however, though it claim the distinction of being general, by no means merits such indiscriminate commendation. In natural philosophy and mathematics, at the æra of its publication, it was unrivaled, and continued so, till, by a further enlargement of the bounds of science, it became incomplete; and it is to be regretted that the supplement, added to the fifth edition in 1736, aims rather at supplying the omissions in other branches of science, than the additions in mathematics or philosophy.

While these dictionaries preceded Mr. Chambers's work in the general circle of arts and sciences, many more limited publications of the same kind co-existed, among which we may particularly mention Ozanam's 'Dictionnaire Mathématique,' a most excellent work, the chemical dictionary of Johnson, the medical ones of Blanchard and Castellus, the sea dictionary of Mainwaring, and some others in the French language.—But who can even recount the *successors* of Mr. Chambers, and of the 'Encyclopédie Méthodique' of the French? Each of these are now receiving the most modern improvements in their respective capitals; and they are followed by others of no mean pretensions, particularly the 'Encyclopædia Britannica' in Scotland, and the present Encyclopædia in this metropolis. Though we do not attempt to enumerate the copies of a copy, the shadows of a shade, we are yet in justice called to notice some other truly original works. Rousseau's dictionary of music, and Macquer's dictionary of chemistry, in France; Dr. Hutton's philosophical, and Mr. Nicholson's chemical dictionary, in England, are of this kind; and if the last, from the change in the chemical system, should seem now obsolete, we trust it will urge the author to additional exertions in a new form. In other sciences, there are many valuable works. From Jacob, in jurisprudence; from Gusseme and Rasches, in numismatology; from Miller, in gardening; and from a French society in arts and trades; with many others, which, to mention, would render this article a catalogue. Now that mineralogy has assumed the shape of a science, it may properly constitute a part of some new edition; for we have frequently had reason to complain of the want of such a *desideratum*. A medical dictionary also, equally distant from the vague crudity of Motherby and the tedious compilation of James, would be a very valuable work.

A dictionary of arts and sciences may either consist of a simple explanation of terms, or may contain distinct treatises on each branch. Yet in no modern dictionary is either plan followed exclusively. As it is not, on the one hand, easy to give a definition, without some little explanation leading to a short disquisition, so neither, on the other, would an unconnected series of treatises, without explanations, be satisfactory.

Every dictionary has therefore united both plans, leaning, occasionally, a little more to either, according to the original destination of the work. It has been generally the object of the authors to advance complete systems of each science, and to connect the scattered parts by references. This, however, they have seldom successfully effected: the references have been usually numerous; these articles have referred to others, till the original subject has gradually vanished in collateral ones, and at last totally disappeared. Another kind of reference is more important, *viz.* to the authors who have furnished the article, and to those by whom the subject is more minutely aud scientifically explained, than the form of a dictionary will admit. Rare have been the assistances of this kind. More than one lexicographer may reflect,

'*Mecum habito; et novi quam sit mihi curta supellex.*'

The object of the work is thus explained in the preface:—

'To facilitate the labours of the industrious and the ingenious, to guide the hand of the diligent mechanic, and to extend the pursuits of the skilful artist, are the chief objects of publications like this; which, as their title of Encyclopædia expresses, embrace, in the complete circle of the arts and sciences, the true principles of social life.

'In proportion only as knowledge is diffused, and the advantages of it are clearly understood, the importance of such a work can be justly estimated. It presents, not solely a barren gratification to curiosity, but it is the spring of action, and the source of opulence: it instructs us to supply by human arts the deficiencies of nature; it controls fancy by experience; and placing before our eyes a long series of experiments, it enables us to reject the false, to adopt the true, and to improve the useful.' Vol. i. p. v.

'In the conduct of our work, we have indeed chosen the article of 'husbandry' as the foundation of manufactures, since the productions of nature are the materials for skill; but the same assiduous attention has been paid to all the liberal and mechanical arts, to every science, human or divine. Each forms a separate treatise; each has been adorned with whatever useful information could be gleaned from ancient or from modern literature; and the whole, thus carefully arranged and combined, presents to the reader a convenient library, replete with ready and profitable instruction on every subject.

'We are not backward, indeed, to confess that our work has profited in some considerable degree from the labours of our northern predecessors; but the "Encyclopædia Britannica," exclusive of the imputation of national partiality, has been conducted on so wide and so expensive a scale; has been swelled with such a variety of uninteresting biography; with tedious geographical descriptions of obscure towns and villages; with minute histories of fabulous heroes and divinities; as sufficiently to justify the compilation of a

dictionary of the arts and sciences, both less costly and less cumbersome, though we trust not a whit less useful than their voluminous publication.

'Neither must it be forgotten by our readers, that years have elapsed since the first publication of the "Encyclopædia Britannica." During this period, the active genius of man has explored a great variety of new paths in the regions of science; and of these it will be found that we have fully availed ourselves, not only in the body of the work, where most of the recent discoveries and inventions are carefully noted, but also in our supplement, which, whilst it enabled us to supply some omissions, and to correct some errors (unavoidable in so multifarious a work), has afforded us an opportunity of tracing the labours of the learned and ingenious up to the present time; a motive which, we trust, will sufficiently account for and excuse its extension somewhat beyond what we intended, or our subscribers may have expected. Nor are the proprietors of this work afraid to assert, that the engravings which accompany it, possess a striking superiority, both in number and execution, over those which have been given in any similar performance.' Vol. i. p. vi.

As we began with the authors' professions, we shall progressively advance with a review of the work, which must nevertheless be cursory, from its extent, and the multiplicity of objects which it embraces. We shall then offer our opinion how far the end proposed has been attained.

As it is impossible to follow every article, to examine what is omitted and what is redundant, we shall only observe, that the explanations are, in general, clear and explicit. We remark, indeed, that a large portion of the supplement is filled with additional articles of the three or four first letters, as if, in the early stages, the authors had been less attentive; and we observed, with surprise, that among the omissions were some very common words which even Harris would have supplied. In the remaining part of the supplement, there are still, we think, omissions; and we could point out corrections which would yet be useful. But where is the work in every respect perfect, '*omnibus numeris absolutum?*' It is certainly no *dictionary* yet known, each of which, when tolerably conducted, is a work of peculiar labour, and affords, in Scaliger's opinion, a punishment sufficient for the worst of crimes.

'Lexica contexat: nam cætera quid moror? omnes
Pœnarum species hic labor unus habet.'

In this examination, professedly confined to the treatises, we shall occasionally notice also a few of the distinct articles, which, though arranged among those comprising explanations only, yet contain some short disquisition---articles of that equivocal nature in which the two plans just mentioned coincide. The first that occurs to us is on 'acids;' and we

regret that we must begin with reprehension. Too much space is employed in recapitulating Mr. Kirwan's early arguments in opposition to Lavoisier's system---a system which the former has now adopted---and the modern doctrine engages too little of our author's attention. This is not rectified in the supplement; but we shall resume the subject under the article of 'chemistry.'

The first distinct treatise is on 'acoustics.' It is popular, rather than elementary, and confined to the vibrations of *stringed* instruments. Yet perhaps the whole doctrine should have been brought together; and we are left in uncertainty where it is resumed. We must thus early mention a striking error, *viz.* that the articles have neither references to the other portions of the work annexed, nor to authors who have treated more fully of the different subjects. Under the head of 'acids,' for instance, there is no reference to the article 'chemistry;' and no enumeration of the different kinds of acids, to lead us to look for the properties of each under their separate titles.

The mechanical properties of 'air' are well explained; but, when the authors treat of the chemical, they are too much immersed in the old school, and scarcely dare to venture beyond the leading-strings of Dr. Priestley. The old nomenclature is also retained, with all its imperfections; and even phlogiston is not wholly resigned, or resigned unwillingly. In consequence, perhaps, of the period at which this article was composed, the number of known aërial fluids is very incomplete. The heavy inflammable gas, the nitrous oxyd, the hydrocarbonat, &c. are omitted.

'Aërostation' is detailed at some length. Of 'algebra,' the elements only are given; and, in a work of this kind, we can expect no more: they are explained with great neatness and sufficient precision. The article of 'alkalis' is instructive; but the author has not been sufficiently explicit in his account of the principles of the volatile alkali, from not consulting the latest authors. We thought that there was much ingenuity displayed in the distinction of 'animal' and vegetable substances. Many of the remarks are also new; and, were we not afraid of extending our account of this work too far, we should have copied some of the observations. The articles on 'archery,' 'animalcules,' and 'annealing,' are, we think, good; and the treatises on 'anatomy' and 'architecture' contain a scientific and sufficiently complete view of their respective subjects. The treatise on 'arithmetic' is full and satisfactory; that on 'astronomy' very comprehensive; but we look in vain for Dr. Herschel's late labours, which were at least in time for the supplement. The account of 'comets' might have been improved from M. Pingrè's

very systematic work; and the appearance of the tails, as connected with the *Aurora borealis*, and the latter as occurring exclusively in the magnetic meridian, would, if brought together, have elucidated this difficult inquiry. The 'stars' dim twinkling' through the light of the *Aurora* are not sufficiently noticed. The properties of the 'atmosphere' are well detailed; but they should have been included under 'air' or 'aërology;' or at least a reference should have been inserted, to inform the inquirer where these are to be found. As there are no regular references, an index should have been subjoined: it may not yet be too late.

In the former part of the second letter of the alphabet, there are few treatises; but the articles are often extensive and valuable. We can notice only the following.---'Banks' and 'banking' are explained at some length. 'Baptism,' and the various opinions on the subject, are explained also with great propriety. We mention this the more readily, to remark that the articles on religious subjects are, in general, executed with judgement, and display considerable knowledge, as well as a rational piety, without an improper attachment to any particular sect. What is said of horses occurs under the article 'barbs,' where it would be least expected; and it would appear still more unlikely to find an account of the ass, the zebra, the hemionus of Pallas, and the mule, under this article. The account of the horse, however, is clear, and on the whole exact. The article of 'bards' is incomplete, and somewhat erroneous: they are improperly confounded with the druids. The 'bark,' and its uses in the economy of vegetation, are described chiefly from authors of a former date; and the more modern philosophers are in a great degree overlooked. What relates to the 'Peruvian bark' appears to be full and correct. The article of 'barometer' is also satisfactory; but, with respect to the cause of the mercury sinking on rain, and rising on the return of dry weather, the authors feel a difficulty which has perplexed all their predecessors, merely from not reflecting that the barometer is not so much a standard indicative of the absolute weight of the air, as of its elasticity. What relates to the mode of measuring heights by this instrument is too short, and inconclusive. On the subject of 'basaltes' and its origin, the opposite opinions are detailed at some length, without any conclusion. The later authors, and the now general opinion that their form is the consequence of retraction from solution, and not from fusion, are omitted. The lizards, or rather the species of lacerta, including the crocodile, occur under the term 'basilicus,' one of its species; a very material error in arrangement, which pervades the whole work.

The following articles in this letter appear to be ably exe-

cuted; and several of them, as well as our recollection assists us, seem not to have made a part of any former English dictionary. This is particularly the case with 'bird-catching,' which is a curious and entertaining subject. Under the titles of 'beaver' and 'bee,' we have too much of the common fancy of extraordinary sagacity, directed to an end which requires wisdom to discover, and reasoning to pursue. Later observation has destroyed many of these final causes; and the whole of these contrivances do not reach beyond the powers of instinct in other animals. The hexagonal form of the cells of the honeycomb, for instance, has been extolled as a masterpiece of contrivance, because it contains the greatest space with the least quantity of materials. The observers are not aware that every viscid fluid extended on a plane surface retracts in a similar form in drying. The biographical accounts are more numerous, more judicious, and comprehensive, than in many other dictionaries. We have sometimes thought that they were not sufficiently full; but we greatly distrust any judgement of this kind formed from a partial view, as it is difficult to adjust the proportion of attention which any subject may demand in so extensive a work. The article of 'blindness' is certainly too long: much space is filled with declamation; and the degree of improvement, of which the other senses are capable, seems not to be clearly understood. Dr. Moyes, in his youth, made a watch; but, what is more surprising, he made previously the tools. His compasses were only the tongue of an old buckle bent to the proper distance. There is not any evidence of the blind distinguishing colours. We knew a dyer who attempted it, and often succeeded; but we found that he was assisted by the smell. A blind man, with all his acuteness of hearing, cannot always say on which hand a distant sound is approaching. Yet, from the tone of his voice, often from his sense of feeling, he will say whether a room be large or small, low or high: when he looks out at a window, he will be able to determine whether the prospect be confined or extensive, whether it face the street or the country. The same sagacity of feeling was observed in a blinded bat by Jurine.

Under the article 'blood,' we find a very enlarged account of this general fluid of the system, which the author thinks is the immediate reservoir of the vital principle. We wish not to extend our article very far; but, as this principle of the Hunterian school is here more fully drawn out, and more ably supported, than in any other modern system, we shall select the passage. We may perhaps be pardoned, as, in a work of this kind, novelty is not generally expected, and not often found.

'To follow this dispute through every argument that hath been

or that may be used by both parties, would prove tedious, and to us appears in a great measure unnecessary, as the following short considerations seem to decide the matter absolutely against the patrons of the nervous system. In the first place, then, if we can prove the life of the human body to have existed in, or to have been communicated from a fluid to the nervous system, the analogical argument will be very strongly in favour of the supposition that the case is so still. Now, that the case once was so, is most evident; for the human body, as well as the body of every other living creature, in its first state, is well known to be a gelatinous mass, without muscles, nerves, or blood-vessels. Nevertheless, this gelatinous matter, even at that time, contained the nervous fluid. Of this there can be no doubt, because the nerves were formed out of it, and had their power originally from it; and what is remarkable, the brain is observed to be that part of the animal which is first formed. Of this gelatinous fluid we can give no other account, than that it was the nutritious matter from which the whole body appears to be formed. At the original formation of man, and other animals, therefore, the nutritious matter was the substratum of the whole body, consisting of muscles, nerves, blood-vessels, &c. nay more, it was the immediate efficient cause of the nervous power itself. Why should it not be so now as well as then? Again, in the formation of the embryo, we see a vital principle existing as it were at large, and forming to itself a kind of regulator to its own motions, or a habitation in which it chooses to reside, rather than to act at random in the fluid. This habitation, or regulator, was undoubtedly the nervous system, and continues so to this moment; but at the same time, it is no less evident that a nutritious fluid was the immediate origin of these same nerves, and of that very nervous fluid. Now we know, that the fluid which in the womb nourishes the bodies of all embryo animals, is necessarily equivalent to the blood which nourishes the bodies of adult ones; and consequently, as soon as the blood became the only nutritious juice of the body, at that same time the vital or nervous fluid took up its residence there, and from the blood diffused itself along the nerves, where it was regulated exactly according to the model originally formed in the embryo. Perhaps it may be said, that the vital power, when once it hath taken possession of the human or any other body, requires no addition or supply, but continues there in the same quantity from first to last. If we suppose the nervous power to be immaterial, this will indeed be the case, and there is an end of reasoning upon the subject; but if we call this power a volatile and elastic fluid, it is plain that there will be more occasion for recruits to such a power than to any other fluid of the body, as its volatility and elasticity will promote its escape in great quantities through every part of the body. It may also be objected, that it is absurd to suppose any fluid, or mechanical cause, capable of putting matter in such a form as to direct its own motions in a particular way: but even of this we have a positive proof in the case of the electric fluid. For if any quantity of this matter has a tendency to go from one place to another where it meets with difficulty, through the air for instance, it will throw small conducting substances before it, in

order to facilitate its progress. Also, if a number of small and light conducting substances are laid between two metallic bodies, so as to form a circle, for example; a shock of electricity will destroy that circle, and place the small conducting substances nearer to a straight line between the two metals, as if the fluid knew there was a shorter passage, and resolved to take that, if it should have occasion to return. Lastly, it is universally allowed, that the brain is a secretory organ, made up of an infinite number of small glands, which have no other excretories than the medullary fibres and nerves. As a considerable quantity of blood is carried to the brain, and the minute arteries end in these small glands, it follows, that the fluid, whatever it is, must come from the blood. Now, there is no gland whatever, in the human, or any other body, but will discharge the fluid it is appointed to secrete, in very considerable quantity, if its excretory is cut. Upon the cutting of a nerve, therefore, the fluid secreted by the brain ought to be discharged; but no such discharge is visible. A small quantity of glairy matter is indeed discharged from the large nerves; but this can be no other than the nutritious juice necessary for their support. This makes it plain, even to demonstration, that the fluid secreted in the brain is invisible in its nature; and as we know the nervous fluid hath its residence in the brain, it is very probable, to use no stronger expression, that it is the peculiar province of the brain to secrete this fluid from the blood, and consequently that the blood originally contains the vital principle.' Vol. i. p. 797.

We cannot now enlarge on this subject; but we think the author mistaken; and may take another opportunity to point out the error and its source.

The only treatise in this volume that we have not noticed is on 'bleaching.' The operation, as formerly conducted, is well explained; but our author stops short at the introduction of dephlogisticated muriatic acid, and its proposed use. It is now generally employed; and various refinements in this process have been introduced. Mr. Higgins's economical improvement, in substituting sulphuret of lime, is a very valuable one.

The plates bound with the first volume, though all do not belong to it, are fifty-six in number. The execution is greatly superior to those of any preceding dictionary, and the objects, in general, well chosen. To some we must, however, object, particularly to the view of Noah's ark, a representation in every respect puerile and uninteresting. We shall resume the work at a future opportunity; and, having now introduced its general character, with instances of its principal faults and merits, our subsequent progress will be more rapid.

ART. II.—*An Essay on the Principle of Population; or, a View of its past and present Effects on Human Happiness; with an Inquiry into our Prospects respecting the future Removal or Mitigation of the Evils which it occasions. A new Edition, very much enlarged. By T. R. Malthus, A. M. &c. 4to. 1l. 11s. 6d. Boards.* Johnson. 1803.

THE first edition, or germinal pamphlet, which has expanded its leaves into this spreading quarto, was reviewed in our number for January 1799. It was then an anonymous work; it is now avowed by Mr. T. R. Malthus, A. M. a fellow of Jesus College, Cambridge. It will secure to him a lasting distinction for the lucid and acute reasoning, the deep and comprehensive research, and the important practical counsel, which it involves.

It respects the doctrine of population in all the points of view in which it concerns the statesman. The first object of the author is to ascertain its natural rate of increase. This he pronounces to be *progressive in a geometrical ratio.* He extracts from 'Price's Observations on Reversionary Payments' some American lists, which show that, in certain circumstances, it has doubled in twenty-five years. He produces the corroborating *census* of the republic: he quotes the opinions of some writers who suppose a more rapid increase to be possible. He infers that population, if left to itself, and unchecked, would every where double in twenty-five years.

This inference is surely rash. It is a known law of nature, that the certainty of reproduction is proportioned to the rarity of sexual intercourse. In villages the loose women have bastards; in cities hardly ever. In opulent families, where the means of maintenance and the incitements to gratification are profusely supplied, orbity is common. In needy families, in chilly climates, in seasons of adversity, births never fail. Our breeding counties are the highlands of Scotland, and the wolds of Yorkshire. In London few are born, although the attraction thither of the vigorous, the robust, and the beautiful of both sexes is perpetual. Take the most unproductive individuals in London, the thieves and their bedmates, and transplant them to Botany-Bay; and the tendency to increase and multiply astonishes the most experienced among them: they are there scattered in different plantations, and disposed by fatigue to temperance. Wherever population condenses, sexual intercourse is more and more promiscuous and frequent. The tendency to reproduction therefore *diminishes with the density of populousness;* and this wise law is enforced with the most exquisite benevolence by nature. There is no instance on record of two successive generations multiplying with equal rapidity. The natural rate of increase

is in a decreasing ratio. It is quite the reverse of a geometrical progression. It diminishes regularly in a confined country, where the condensation is regular: it diminishes irregularly in a settlement at large, where the opportunities of dispersion and segregation operate unevenly. The first and most essential position of our author requires considerable qualification.

The lives of nations resemble those of individuals. The growth at first is in both probably rapid; but respecting nations in a state of infancy our information is deficient. At length arrives a period in which agriculture and the arts of life are first generally diffused and known: this period of national growth answers to adolescence, and is accompanied with a rapid start in the growth of the body politic, and a palpable increase of its members. Next comes the adult period, during which nations are usually stationary for a long time. At last arrive the senility and decrepitude, which are marked indeed by the profuse indulgence of sensual gratifications, but a declension of the productive powers. Our mechanics have invented what they call heart-wheels, to lift and drop the bobbins of a spinning-engine. The form of these wheels much resembles the section of a pear. Cut one of them in halves through the apex, and the curvilinear side will represent the habitual progress of populousness. It begins with a rapid start from the eye, and decreases in gradual acumination to the stem.

Man willingly divides his time between toil, pleasure, and repose. Pleasure palls; and repose is unattainable without interventions of exertion and fatigue. If, therefore, by eight hours of daily toil, a family be easily reared and comfortably maintained, population is really left to itself. This has been the case for a century past at Naples. The means of subsistence there have been remarkably cheap, and the wages of labour sufficiently ample; yet the increase of inhabitants has been scarcely perceivable. Why? Moral restraint was in a manner unknown there. Idleness and fruition basked in the day-light, and abortive pleasure had replaced creative abstemiousness. But our author unaccountably enumerates moral restraint among the preventive checks of populousness. To what do we owe the fecundity of private women, and the sterility of public women, but to moral restraint? How fast the puritanic sects multiply! They have, therefore, been patronised and encouraged by wise statesmen in countries deficient in people. How free from progeny is the libertine neighbourhood of the barracks and the inns of court! The opinions and habits, which best accord with promiscuous intercourse, always take root instinctively in an overpeopled district. Moral restraint, therefore, is not a preventive check, but a prospective stimulus to population. It is an engendering, not an infanticidal, principle; a Lucina, not a Cotytto.

Another fundamental maxim of our author is, that subsistence can only be increased in an arithmetical progress. Some subsistence is given by nature, as fishes and game: its reproduction in the main corresponds with the waste; it neither increases nor diminishes. Some subsistence is reared by man, as cattle: its reproduction (if there be land to stroll over) corresponds with the fertility of the animals protected: in the case of sheep and oxen, it is more rapidly progressive than human population. In the pastoral state, the growth of subsistence notoriously outstrips that of consumption; so that, as at Goree and Buenos-ayres, cattle are killed for their hides and tallow, and the carcases abandoned to the vultures. In the agricultural state of human society, it is not easy to come at the possible rate of increase in the means of subsistence. Yet surely there are few farmers who would find it difficult, in any given year, to bring an additional tenth of land into cultivation. There are few who would find it difficult, in the course of ten years, to double their occupations, and to provide the requisite labour, stock, and capital. In ten years, then, the quantity of arable land could be doubled: so that, if human population doubled in ten years, which it has no-where done, the means of subsistence could keep pace with it; for subsistence is the result of labour applied to land.

So long then as there is waste land on the surface of the earth, it is plain that the means of subsistence can outstrip the utmost efforts of population; it can increase in a ratio still more rapid. Now the quantity of waste land on the surface of the earth is immense. The western end of Europe, and the eastern end of Asia, are the only peopled countries. All the rest of the earth, that is, about nine-tenths of the whole, is still unfurrowed by the plough. If, therefore, the surface of the globe exceed nine millions of square miles, and that of land approaches four millions of square miles—if, of this, little more than a tenth be under the plough—there remain full three millions and a half of square miles still capable of being applied to the production of subsistence. This, at forty acres to a family of five persons, would provide for two hundred and eighty or three hundred millions more of men than are yet in being. Thus the danger of wanting subsistence is surely not very imminent; not sufficiently so to become in our times a motive of legislative provision or political conduct, much less of private personal morality.

But this is not all. In the year 1743, the celebrated Celsius inserted in the 'Memoirs of the Academy of Stockholm' a series of observations and experiments, made by him and his friends, on the continual decrement of the sea. He has endeavoured to prove that it sinks at the rate of four inches and a half in eighteen years. It is evident, therefore, that a fresh belt of

coast must be continually annexing itself to every island in the ocean; that every continent is widening, and every shoal tending to become habitable land. Pallas has proved that seas, more extensive than the Caspian, separated, not long ago, Persia and Hindustan from Siberia and Tartary. Isles are continually emerging in the whole Pacific Ocean, as we have often pointed out. How rapid is the accession of habitable surface, cannot easily be known, especially as the decrement of the sea may itself be a variable quantity. Evaporation seems to be the medium through which water is taken from the sea, scattered on the land, and fixed there in the form of vegetable fibres or crystalline wedges. In this case, the smaller the surface, the slower the decrease of the sea: and all geographical observation evinces, that, in the early ages, the desiccation really advanced faster than at present. Still the quantity of territorial surface, laid bare every century, may be invariably the same; because, while the shores were steep, a great decrement laid dry but little surface; now that shores have less inclination, a small decrement may dry an extensive surface. The silhouette of a mountain approaches a cycloidal curve.

Assuming that in Noah's time the mountains of Ararat were mere islands in the universal ocean, across which he drifted, it has required about four thousand years to metamorphose such clusters of mountain-tops into such continents as Asia and Africa. In four thousand years more, then, the surface of land may exceed that of sea, and have increased one-half. Busching estimates the actual population of the earth at one thousand millions. Half as much land more will admit an addition of five hundred millions, supposing only the present degree of compression to exist: but this compression in the civilised countries is more than triple the average compression: it follows that fifteen hundred millions of men more can, with an additional half of dry land, be provided for without any improvement in the arts of agriculture or government. An immediate addition of three hundred millions to the contemporary population of the earth---an eventual addition of fifteen hundred millions to the contemporary population of the earth---can, to reason from analogy, find subsistence as easily as hitherto, if the natural processes advance for the next four thousand years, as they appear to have done during the last four thousand. But if procreation, which in four thousand years has produced one thousand millions, should acquire an accelerated velocity, and produce in the next four thousand years two thousand millions, which seems to be the law of increase contended for by Mr. Malthus, even then only one-ninth of the whole would be superfluous, supposing the arts of supply unimproved. Surely,

therefore, admitting for a moment the rate of population to be really such as Mr. Malthus imagines, subsistence would still be commensurate with its demand.

In discussing the checks to population among the American Indians, Mr. Malthus constantly notices the difficulty of subsistence, and the various sources of misery. He dwells little on the early, the premature, concubinage so profusely practised by their women; unwilling to class moral restraint among the corroborating causes of health and production. It is a great merit of religion to have introduced this restraint, and thus to have favoured an ampler, more orderly, and more educated, multiplication. Medicine has reluctantly and indecisively acquiesced in the continence of adolescents, and the monopoly of matrimony. Yet in all under-peopled districts, and during war, puritanic opinions are usually progressive: but in all over-peopled districts, and during peace, libertine opinions are usually progressive; so that there seems to be a secret feeling of general interest at the bottom of the preference; a conviction that the one set of doctrines conduce to accelerate, and the other set to retard the multiplication of the species. The puritanism taught in under-peopled districts includes both sexes; the object being to compel the males to marry early. The puritanism taught in time of war respects females only: the competition of males being then diminished, higher exactions of character, accomplishment and fortune can efficaciously be claimed of the marriageable women. Nor is this very inequitable. Of all the forms of moral restraint, abstinence from adultery in the female is the most important to society. Frugality, enterprise, all the exertions of a father to provide for his children (and these are the virtues that enrich a state), relax when a doubt intervenes of the offspring being his own; the laws concerning the descent of inheritances also cease to appear valuable; and thus the whole system of property, as well as of domestic happiness, is wounded in its vitals. Great Britain is not only domestically the happiest, but collectively the richest of countries, because its marriages are so spotless.

We agree, however, entirely with Mr. Malthus, in his principal inference, that the resident population of a country, once fully settled, is always proportioned to the means of maintenance; that the waste of war and pestilence is speedily replaced; and that the superfetation of improvident matrimony, by inflicting the inconvenience of lower wages and severer privation, soon roots itself out, or prevents further augmentation. For the excess of people, which in given societies is very real, the statesman is to seek situations. It is his most important duty. Transplantation to the unsettled districts of

the earth is at once the most humane, and eventually the most profitable, of all forms of disposal. How can domestic industry be extended so effectually as by rearing distant nations of customers? War is, of all forms of removing the excess of people, the most unthrifty; because the expense of rearing, and the labour of instructing, the adults, whom it destroys, is all incurred in vain; and the destruction consists of machines for executing productive industry, which it had required twenty years to bring into working order.

In fourteen chapters the first book is comprised: the second opens with some very interesting original information concerning the state of the people in Norway and Sweden. Over with the leaves, away with the chapters, where every paragraph is valuable! What has a reviewer to do with sections, which admit only of praise? His occupation's gone, where every observation is new instruction, and every train of argument lasting conviction. O for the eyes of Argus, for the hands of Briareus, to read and turn a hundred such pages at a volition! In the third book, eighth chapter, luckily there is something to cavil at—but first a long extract.

'The economists consider all labour employed in manufactures as unproductive; and in endeavouring to disprove this position, Dr. Smith has been accused of arguing obscurely and inconclusively. He appears to me, however, only incorrect in applying his own definition to try the reasoning, by which the economists support theirs; when, in fact, the question was, respecting the truth or falsehood of the definitions themselves; and, of course, one could not be applied as a test to the other. Nothing can be more clear than that manufactures increase the wealth of a state, according to Dr. Smith's definition; and it is equally clear, that they do not increase it, according to the definition of the economists. The question of the productiveness or unproductivenesss of manufactures, is allowed by the economists to be a question respecting net produce; and the determination of this question either way, would not affect Dr. Smith's definition, which includes produce of every kind, whether net, or otherwise. And in the same manner, the proof of a net produce arising to individuals from manufactures, would not really invalidate the definition of the economists, though they have laid themselves open to objections from this quarter, by the manner in which they have defended their position.

'They say, that labour employed upon land is productive, because the produce, over and above completely paying the labourer and the farmer, affords a clear rent to the landlord; and that the labour employed upon a piece of lace is unproductive, because it merely replaces the provisions that the workman had consumed while making it, and the stock of his employer, without affording any clear rent whatever. But supposing the value of the wrought lace to be such, as that besides paying in the most complete manner,

the workman and his employer, it could afford a clear rent to a third person, the state of the case would not really be altered. Though, according to this mode of reasoning, the man employed in the manufacture of lace, would, upon the present supposition, appear to be a productive labourer; yet, according to their definition of the wealth of a state, he ought not to be considered in that light. He will have added nothing to the produce of the land. He has consumed a portion of this produce, and has left a piece of lace in return; and though he may sell this piece of lace for three times the quantity of provisions which he consumed while he was making it, and thus be a very productive labourer with regard to himself; yet he has added nothing by his labour to the essential wealth of the state.

'Suppose, that two hundred thousand men, who are now employed in producing manufactures, that only tend to gratify the vanity of a few rich people, were to be employed on some barren uncultivated land, and to produce only half of the quantity of food that they themselves consumed, they might still be considered, in some respects, as more productive labourers than they were before. In their former employment, they consumed a certain portion of the food of the country, and left in return some silks and laces. In their latter employment, they consumed the same quantity of food, and left in return, provision for a hundred thousand men. There can be little doubt which of the two legacies would be the most really beneficial to the country, and which, according to the definition of the economists, would add the most to the wealth of the state.

'A capital employed upon land may be unproductive to the individual that employs it, and yet be productive to the society. A capital employed in trade, on the contrary, may be highly productive to the individual, and yet be almost totally unproductive to the society. It is indeed impossible to see the great fortunes that are made in commerce, and, at the same time, the liberality with which so many merchants live, and yet agree in the statement of the economists, that manufacturers can only grow rich by depriving themselves of the funds destined for their support. In many branches of trade the profits are so great, as would allow of a clear rent to a third person; but as there is no third person in the case, and all the profits centre in the merchant or master manufacturer, he seems to have a fair chance of growing rich without much privation, and we consequently see large fortunes acquired in trade by persons who have not been remarked for their parsimony.

'These fortunes, however, by which individuals are greatly enriched, do not enrich proportionally the whole society, and, in some respects, have even a contrary tendency. The home trade of consumption is by far the most important trade of every nation. Putting then, for a moment, foreign trade out of the question, the man who, by an ingenious manufacture, obtains a double portion out of the old stock of provisions, will certainly not be so useful to the state, as the man, who by his labour, adds a single share to the former stock. And this view of the subject, shews that manufactures are essentially different from the produce of the land, and that the question respecting their productiveness, or unproductiveness, by

no means depends entirely upon the largeness of the profits upon them, or upon their yielding or not yielding a clear rent. If the economists would allow, which, from the manner in which they express themselves, they might be sometimes supposed to do, that the value yielded by manufactures was of the same nature as the produce of the land, though it were allowed to be only accurately equal to the value of their consumption, they certainly could not maintain the position that land is the only source of wealth. A marriage which produces two children, though it contain in itself no principle of increase, yet it adds to the sum of the actual population, which would have been less by two persons, if the marriage had been really barren. But the fact is, that though the language of the economists has fairly warranted this illustration, which Dr. Smith gives; yet the illustration itself is incorrect. In the case of the marriage, the two children are really a new production, a completely new creation. But manufactures, strictly speaking, are no new production, no new creation, but merely a modification of an old one, and when sold must be paid for out of a revenue already in existence, and consequently the gain of the seller is the loss of the buyer. A revenue is transferred, but not created.

'If, in asserting the productiveness of the labour employed upon land, we look only to the clear monied rent yielded to a certain number of proprietors, we undoubtedly consider the subject in a very contracted point of view. The quantity of the surplus produce of the cultivators is, indeed, measured by this clear rent; but its real value consists in its capability of supporting a certain number of people, or millions of people, according to its extent, all exempted from the labour of procuring their own food, and who may, therefore, either live without manual exertions, or employ themselves in modifying the raw produce of nature into the forms best suited to the gratification of man.

'A net monied revenue, arising from manufactures, of the same extent, and to the same number of individuals, would by no means be accompanied by the same circumstances. It would throw the country in which it existed into an absolute dependence upon the surplus produce of others; and if this foreign revenue could not be obtained, the clear monied rent, which we have supposed, would be absolutely of no value to the nation.

'As manufactures are not a new production, but the modification of an old one, the most natural and obvious way of estimating them, is by the labour which this modification costs. At the same time, it may be doubted, whether we can say positively that the price of this labour, added to the price of the raw material, is exactly their real value. The ultimate value of every thing, according to the general reasoning of the economists, consists in being *propre à la jouissance*. In this view, some manufactures are of very high value; and in general, they may be said to be worth to the purchaser what that purchaser will consent to give. In the actual state of things, from monopolies, from superior machinery, or other causes, they are generally sold a price above what the economists consider as their real worth; and with regard to a mere monied revenue to an individual, there is no apparent difference, between a

manufacture which yields very large profits, and a piece of land which is farmed by the proprietor.

'Land, in an enlarged view of the subject, is incontrovertibly the sole source of all riches; but when we take individuals or particular nations into our view, the state of the question is altered, as both nations and individuals may be enriched by a transfer of revenue, without the creation of a new one.

'There are none of the definitions of the wealth of a state that are not liable to some objections. If we take the gross produce of the land, it is evident that the funds for the maintenance of labour, the population and the wealth, may increase very rapidly, while the nation is apparently poor, and has very little disposeable revenue. If we take Dr. Smith's definition, wealth may increase as has before been shewn, without tending to increase the funds for the maintenance of labour and the population. If we take the clear surplus produce of the land, according to most of the economists; in this case, the funds for the maintenance of labour and the population may increase, without an increase of wealth, as in the instance of the cultivation of new lands, which will pay a profit but not a rent; and, *vice versa*, wealth may increase, without increasing the funds for the maintenance of labour, and the population, as in the instance of improvements in agricultural instruments, and in the mode of agriculture, which may make the land yield the same produce, with fewer persons employed upon it; and consequently the disposeable wealth, or revenue, would be increased, without a power of supporting a greater number of people.

'The objections, however, to the two last definitions do not prove that they are incorrect; but merely that an increase of wealth, though generally, is not necessarily and invariably accompanied by an increase of the funds for the maintenance of labour; and consequently, by the power of supporting a greater number of people, or of enabling the former number to live in greater plenty and happiness.

'Whichever of these two definitions is adopted, as the best criterion of the wealth, power, and prosperity of a state, the great position of the economists will always remain true, that the surplus produce of the cultivators is the great fund which ultimately pays all those who are not employed upon the land. Throughout the whole world, the number of manufacturers, of proprietors, and of persons engaged in the various civil and military professions, must be exactly proportioned to this surplus produce, and cannot in the nature of things increase beyond it. If the earth had been so niggardly of her produce as to oblige all her inhabitants to labour for it, no manufacturers or idle persons could ever have existed. But her first intercourse with man was a voluntary present; not very large indeed, but sufficient as a fund for his subsistence, till by the proper exercise of his faculties he could procure a greater. In proportion as the labour and ingenuity of man, exercised upon the land, have increased this surplus produce, leisure has been given to a greater number of persons to employ themselves in all the inventions which embellish civilised life. And though, in its turn, the desire to profit by these inventions, has greatly contributed to sti-

mulate the cultivators to increase their surplus produce; yet the order of precedence is clearly the surplus produce; because the funds for the subsistence of the manufacturer must be advanced to him, before he can complete his work: and if we were to imagine that we could command this surplus produce, whenever we willed it, by forcing manufactures, we should be quickly admonished of our gross error, by the inadequate support which the workman would receive, in spite of any rise that might take place in his nominal wages.

'According to the system of the economists, manufactures are an object on which revenue is spent, and not any part of the revenue itself. But though from this description of manufacutures, and the epithet *stérile* sometimes applied to them, they seem rather to be degraded by the terms of the economists, it is a very great error to suppose that their system is really unfavourable to them. On the contrary, I am disposed to believe, that it is the only system by which commerce and manufactures can prevail to a very great extent, without bringing with them, at the same time, the seeds of their own ruin. Before the late revolution in Holland, the high price of the necessaries of life had destroyed many of its manufactures. Monopolies are always subject to be broken; and even the advantage of capital and machinery, which may yield extraordinary profits for a time, is liable to be greatly lessened by the competition of other nations. In the history of the world, the nations, whose wealth has been derived principally from manufactures and commerce, have been perfectly ephemeral beings, compared with those, the basis of whose wealth has been agriculture. It is in the nature of things, that a state which subsists upon a revenue furnished by other countries, must be infinitely more exposed to all the accidents of time and chance, than one which produces its own.' P. 430.

To begin with the last position, Rome, which has been the most stable of all nations, always depended on foreign supplies of food. Sicily, Egypt, were alternately the granaries of Rome; and Italy was chiefly cultivated to feed cows and horses. Egypt, Lombardy, Flanders, have been remarkably agricultural; they have all been the seats of independent sovereignties, and have all quickly passed away. The agriculture of Spain was once carried to great perfection; but the price of produce having fallen, in consequence of colonial agriculture, below what the state of rental required, this source of prosperity decayed during a short cycle of plenty. France is but beginning to be agricultural: yet it may safely be prophesied, that, as her manufactures decline, the market for produce becoming less, her dole-lands (for, during the revolution, all wastes and commons were distributed to specific owners) will again be suffered to wilder into sheepwalks, wherever they require a troublesome or costly cultivation. Agriculture is an ephemeral, a dependent, source of prosperity. A Babylon can grow up in a Mesopotamia of shepherds, before the plough is invented; but husbandry

cannot dispose of any surplus produce, until industry have first built her cities of commerce and manufacture, and provided the consumer with an income to offer at market. Our author is historically, as well as theoretically, mistaken, in proclaiming agriculture to be a more permanent source of prosperity than commerce.

There is certainly a radical error in the position of Adam Smith (book II. c. 5.), that the capital employed in agriculture adds a greater value to the annual produce of the country than an equal capital employed in manufactures; or, in other words, that agriculture is more profitable to the community than manufactures. Smith altogether omits, in his calculation, to estimate the capital value of the farm to be cultivated, which is as much a part of the capital employed by the cultivator to put industry in motion, as the machinery or raw materials of the manufacturer. Reckoning as he does, it was natural to infer the superior productiveness of the business of the farmer. In like manner, Dr. A. Smith (book III. c. 1.) considers the industry of the country as necessarily prior to that of the town; and supposes the progress of opulence naturally to begin with the surplus produce of the farmer, which he is afterwards supposed to convert to purposes of manufacture. Yet the annals of society do not support this imaginary progress. Towns are founded near convenient rivers in pastoral countries; and agriculture has every where been the consequence of a contiguous market resulting from commercial industry. Manufactures precede husbandry. The oldest countries are the best cultivated. Norfolk, where the worsted manufactures began, has little waste land, poor as its soil is. Lancashire, where the cotton manufactures are recent, has comparatively little inclosure. The peat-bogs of Ireland will not be improved, until the rise of large towns shall furnish to the farmer such customers as may replace to him the expense necessary for rendering them productive.

The only merit of the *economistes*, or physiocrates, consists in arguing well against legal interference, and legal restraint; against bounties or drawbacks on importation or exportation; against duties and regulations; against statutes of apprenticeship, or legal recipes for brewing and baking. Tax the rent of houses and lands, is their cry; and leave every thing else untouched by the mischievous rapacity of meddling financiers. If your taxes, by progressive augmentation, eventually absorb half the rent, where will be the mischief? The capital value of your estates will, indeed, have diminished; they will thus become more transferable; and every transfer occasions the fixation of additional capital: but they will not become less productive; they will afford as much food, as much shelter, as much employment, as before. Every other form of taxa-

tion injures the consumer; this alone is not assessable on the commodity produced; its price depends on the competition of an open corn-market; it falls, therefore, exclusively on the proprietor, on the idle, the useless, the unproductive citizen.

The physiocrates, when they place national wealth in net produce, use a jargon: Smith is not correct in placing it in the exchangeable value of annual produce; for there are other exchangeable values, as of perpetual annuities in the funds, which constitute a part of positive national wealth, so long as they retain an exchangeable value, although they are the very reverse of annual produce. National wealth is the sum of individual wealths; national income the sum of individual incomes; and the profits of a profession are as much a part of it, as a tuft of green hemp, or the boiler of a steam-pump.

We deprecate extremely the doctrine with which the ninth chapter of the third book concludes, that a bounty should be given for the production of corn. From the moment that it ceases to answer to our farmers to raise it at home, let it be brought from the Susquehannah and the Patowmack, where rent constitutes no part of its price, and where it can, consequently, still be reared to advantage during a period of plenty and of cheapness. Beef, butter, and all the articles which cannot be brought from a distance, are the more essential productions of domestic industry.

In the fourth book, a remarkable dissertation on the poor-laws occurs: this author recommends their total abolition. Dr. Priestley has somewhere hazarded the same opinion. The people would, in this case, be left to voluntary provisions against adversity. Purse-clubs and benefit-societies would be more frequent. The benevolent rich would become members, and would bring about very extensive associations. There would be overseers in every district to collect contributions, and apportion relief. The improvident poor, and the niggardly rich, would alone be left out of the association. Why not call in the aid of law, then, to procure, for the one and from the other of these classes, their natural share of aid?

In the eighth chapter, some curious doctrines are advanced concerning the meritoriousness of celibacy.

'The merits of the childless, and of those who have brought up large families, should be compared without prejudice, and their different influence on the general happiness of society justly appreciated.

'The matron who has reared a family of ten or twelve children, and whose sons, perhaps, may be fighting the battles of their country, is apt to think that society owes her much; and this imaginary debt, society is, in general, fully inclined to acknowledge. But if the subject be fairly considered, and the respected matron

weighed in the scales of justice against the neglected old maid, it is possible that the matron might kick the beam. She will appear rather in the character of a monopolist, than of a great benefactor to the state. If she had not married and had so many children, other members of the society might have enjoyed this satisfaction; and there is no particular reason for supposing that her sons would fight better for their country than the sons of other women. She has therefore rather subtracted from, than added to, the happiness of the other parts of society. The old maid, on the contrary, has exalted others by depressing herself. Her self-denial has made room for another marriage, without any additional distress; and she has not, like the generality of men, in avoiding one error, fallen into its opposite. She has really and truly contributed more to the happiness of the rest of the society arising from the pleasures of marriage, than if she had entered in this union herself, and had besides portioned twenty maidens with a hundred pounds each; whose particular happiness would have been balanced, either by an increase in the general difficulties of rearing children and getting employment, or by the necessity of celibacy in twenty other maidens somewhere else. Like the truly benevolent man in an irremediable scarcity, she has diminished her own consumption, instead of raising up a few particular people, by pressing down the rest. On a fair comparison, therefore, she seems to have a better founded claim to the gratitude of society than the matron. Whether we could always completely sympathize with the motives of her conduct, has not much to do with the question. The particular motive which influenced the matron to marry, was certainly not the good of her country. To refuse a proper tribute of respect to the old maid, because she was not directly influenced in her conduct by the desire of conferring on society a certain benefit, which, though it must undoubtedly exist, must necessarily be so diffused as to be invisible to her, is in the highest degree impolitick and unjust. It is expecting a strain of virtue beyond humanity. If we never reward any persons with our approbation, but those who are exclusively influenced by motives of general benevolence, this powerful encouragement to good actions will not be very often called into exercise.

'There are very few women who might not have married in some way or other. The old maid, who has either never formed an attachment, or has been disappointed in the object of it, has, under the circumstances in which she has been placed, conducted herself with the most perfect propriety; and has acted a much more virtuous and honourable part in society, than those women who marry without a proper degree of love, or at least of esteem, for their husbands; a species of immorality which is not reprobated as it deserves.

'If, in comparisons of this kind, we should be compelled to acknowledge that, in considering the general tendency of population to increase beyond the means of subsistence, the conduct of the old maid had contributed more to the happiness of the society than that of the matron; it will surely appear, not only unjust, but strikingly impolitick, not to proportion our tribute of honour and

estimation more fairly according to their respective merits. Though we should not go so far as to reward single women with particular distinctions; yet the plainest principles of equity and policy require, that the respect which they might claim from their personal character, should, in no way whatever, be impeded by their particular situation; and that, with regard to rank, precedence, and the ceremonial attentions of society, they should be completely on a level with married women.

'It is still however true, that the life of a married person with a family, is of more consequence to society than that of a single person; because, when there is a family of children already born, it is of the utmost importance, that they should be well taken care of, and well educated; and of this there is very seldom so fair a probability when they have lost their parents. Our object should be merely to correct the prevailing opinions with regard to the duty of marriage; and, without positively discouraging it, to prevent any persons from being attracted, or driven into this state by the respect and honour which await the married dame, and the neglect and inconveniences attendant on the single woman.

'It is perfectly absurd as well as unjust, that a giddy girl of sixteen should, because she is married, be considered by the forms of society as the protector of women of thirty, should come first into the room, should be assigned the highest place at table, and be the prominent figure to whom the attentions of the company are more particularly addressed. Those who believe that these distinctions, added to the very long confinement of single women to the parental roof, and their being compelled, on all occasions, to occupy the back ground of the picture, have not an influence in impelling many young women into the married state against their natural inclinations, and without a proper degree of regard for their intended husbands, do not, as I conceive, reason with much knowledge of human nature. And till these customs are changed, as far as circumstances will admit, and the respect and liberty which women enjoy, are made to depend more upon personal character and propriety of conduct, than upon their situation as married or single; it must be acknowledged, that among the higher ranks of life we encourage marriage by considerable premiums.' P. 549.

There is, in this, much of truth. If all those who are afflicted with hereditary diseases and imperfections, would resolutely abstain from propagation, it is probable that the health and beauty of the human race would sensibly improve; and there can be no doubt that the various departments of society would still be sufficiently stocked with active members. Other motives justify, and are promoting, the increase of celibacy.—Connected manners may follow. Monastic institutions were rationally encouraged in the over-peopled countries of ancient times, for the purpose of separating the imperfect portion of the species from the more finished portion, which was in duty bound to live a creative life. These institutions may have become receptacles of indolence,

or have degenerated into manufactories of superstition; but they are assuredly capable of an organisation which would contribute to the comfort of age, to the amusement of singleness, to the progress of literature, and to the accommodation of penury. Vows may be foolish; vigilance, unwholesome; segregation, dull; and uniforms, ridiculous: but Charity will remember with gratitude the Sisters of Mercy, and Learning record with veneration the instructive toils of the Benedictines. Tasks of beneficence or utility, adapted to the rank and education of the component individuals, might be distributed among these endowed public boarding-houses: in some, children might be taught to read; in others, statesmen to legislate: here might arise an hospital of nurses, there of muses: here might be manufactured tobacco-pipes, there encyclopædias. We especially recommend the foundation of a splendid college for the luxurious accommodation of a corps of reviewers: we shall willingly assist in the selection of the library, and solicit the refusal of the pleasanter apartments.

This truly philosophic work contains important contributions to statistical knowledge and to political truth: it conducts controversy with urbanity; it is composed with perspicuous propriety.

ART. III.—*Remarks on a late Publication, entitled, "An Essay on the Principle of Population; or, a View of its present and past Effects on Human Happiness. By T. R. Malthus, A. M. &c."* 8*vo.* 2*s.* Bickerstaff. 1803.

THIS commentary is about worthy to form an article in one of our daily newspapers. It notices with early attention the distinguished work of Mr. Malthus, and fixes especially on two sweeps of argument for critical animadversion. The one respects late marriages, which Mr. Malthus recommends as the least mischievous check on the too rapid progress of population. There can be no doubt of the efficacy of this remedy. Marriages usually produce from four to five children. Out of four or five births, only two live to marry; so that each marriage exactly rears one couple, and no more. If, therefore, all persons married at thirty-five and died at seventy, there would be no increase of population at all: the grand-children would replace the grand-parents, and the numbers of mankind would neither diminish nor augment. If all persons married after thirty-five and died at seventy, population would decrease. If all persons married before thirty-five and died at seventy, population would increase. All the rapid progresses of population are accomplished by early

marrying, which provides a progeny contemporary with the progenitors.

We will hear this writer on the poor-laws, which are his second chief topic.

'Mr. Malthus devotes two chapters to the subject of Poor Laws, and more particularly those of England. "The first obvious tendency of the English poor laws," says the author, "is to increase population, without increasing the food for its support. A poor man," he continues, "may marry without any prospect of being able to support a family without parish assistance. They may be said therefore to create the poor which they maintain; and as the provisions of the country must, in consequence of the increased population, be distributed to every man in smaller proportions, it is evident, that the labour of those who are not supported by parish assistance, will purchase a smaller quantity of provisions than before, and consequently more of them must be driven to apply to parish assistance." The premises of this argument are just, and furnish much important matter of inquiry. But the conclusion does not appear to me by any means sound or satisfactory. Such a self-increasing system, proceeding in the geometrical series described by the author, must long ago have swallowed up at least nine-tenths of the population of this country. The second objection to the poor laws of England, adduced by Mr. Malthus, is, that "the quantity of provisions consumed in workhouses upon a part of society that cannot be considered as the most valuable part, diminishes the shares that would otherwise belong to more industrious and more worthy members, and thus forces more to become dependent." The inference drawn in this latter argument is precisely the same as in the former, and liable to the same objection, *reductio ad absurdum*. But the position itself indicates very narrow views of policy; for the greater part of those who are subsisted in parish workhouses are the old, the infirm, and the absolutely indigent, who must be maintained by some funds, either drawn directly from their poor relations, which would increase the very evil complained of by Mr. Malthus, or from the wealthier part of society, by regular contributions. But I shall not dwell upon the futility of the latter position. Thus far the author's doctrine appears to be just, that the parish workhouses of England do in a very great measure create their own poor. The easy and universal access to those charities tends to diminish the influence of moral restraint; they act as a bounty upon marriage, and weaken the spring to exertion and parsimony. They may be said therefore, with justice, to encourage those very marriages which they are obliged to support; and the production of those very children which they are obliged to maintain; and it is only because the sources of poor-law revenue are limited, that the numbers supported by it have limits also. But the operation of these laws is worse than nugatory, it is positively bad; and in the author's sentiments I entirely agree, that they directly tend to encourage idleness, to reward want, and to cherish a spirit of prodigality and dependence. Mr. Malthus may therefore

be justly of opinion, that, as they at present stand, nothing short of entire abolition can ever remove the evils which originate in them. But I am very far from coinciding with him in opinion, that the poor in a flourishing, and more especially in a commercial country, should be left altogether to nature and chance for subsistence in all the vicissitudes of life and of fortune.

'It may, I think, be demonstrated, that provisionary laws, for the relief of the poor, under very strict limitations, are very important objects of political legislation. And in a manufacturing country, where the demand for labour is always very precarious, where the wages of labour are perpetually varying, and where a full complement of inhabitants renders these variations dreadful instruments of misery, the duty of provision is decided and imperious. And this provision ought to be either legislative or parochial. If the affair be left to private and spontaneous charity, the contribution will be either too great or too little; it must of necessity be variable in its amount; precarious in the supply; and, generally speaking, ill applied. Private benefactors are neither willing nor able to make the proper enquiries, nor to observe the due medium between liberality and profusion, between satisfying the absolute demands and gratifying the inclinations of those whom they relieve. The funds for the assistance of the poor, must be levied upon the rich, according to a certain rate; and distributed by appropriate persons. And let us not despair of being able to establish parochial or other fixed institutions, for the relief of certain classes of indigent poor, upon principles neither remote from our conceptions, nor far removed from our abilities to comprehend.' P. 50.

What our author says of workhouses is, in a great degree, true. They ought, certainly, to receive only single persons; the sexes should be separated from each other; the children should be separated from adults. The married poor should always be relieved at their own houses: it is impossible to rear a family with the slightest regard for cleanliness, decency, or moral order, which is exposed every winter to be steeped in the contaminating atmosphere of a workhouse. The first account in history of an institution for the relief of the poor is that which Herodotus gives of the 'Table of the Sun.' A public dinner was provided by the priesthood, of which the necessitous were allowed to partake. This is not merely the earliest, but the wisest form of relief. To dwell separately is essential to morality; but to feed the poor together at a public table is cheaper than to distribute aliment. Every parish should have its prytaneum; where, in seasons of distress, the poor might be fed at the public charge. A Rumford kitchen could be put up in the vestry, and the table spread in the church-aisle.

ART. IV.—*Philosophical Transactions of the Royal Society of London. For the Year* 1803. *Part I.* 4*to.* 13*s. sewed.* G. *and* W. Nicol. 1803.

WHILE authors speak with peculiar complacency, and sometimes with an ill-concealed triumph, of the gigantic energy of the French directory, who united three excellent societies into one peculiarly languid in its exertions, and not highly interesting in its publications, we may hold up, in opposition, with a conscious dignity, the labours of the Royal Society. Without any pecuniary support from government, without titles, distinctions, or pensions, the members and contributors, volunteers in the cause of science, suffer no year to pass without exertions highly honourable to their active energy. If it be contended that the volumes are unequal in interest or execution, the charge may be admitted; for where is the philosopher at every moment equally acute and penetrating; where the author at all times able to relate his observations with equal spirit and propriety? The mind, like the body, has its periods of excitement; nor will the strongest exertions enable it, at all times, to equal the demands. In every volume, however, we meet with papers of interest and importance; and there are few of them in which we do not find most valuable additions to our scientific knowledge. The most distinguishing feature of this part of the work is Mr. Hatchett's paper on the various alloys, &c. of gold. We must, however, follow the articles in their order.

'I. The Bakerian Lecture. Observations on the Quantity of horizontal Refraction; with a Method of measuring the Dip at Sea. By William Hyde Wollaston, M. D. F. R. S.'

Dr. Wollaston, in this paper, offers some judicious observations on M. Monge's explanation of the optical phænomenon, the *mirage*, and explains the advantages of ascertaining the horizontal refraction, 'on account of the variations in the dip of the apparent horizon, from which all observations of altitude at sea must necessarily be taken.' Accident suggested, at least, one cause of horizontal refraction, *viz.* a difference of temperature between the air and water. When the latter has been warmed by a long continuance of heat, it does not soon acquire the new temperature when a change occurs; and, from the communication of its heat, there is always a stratum of warm air between the water and the superior parts of the atmosphere.

'From a review of the preceding table it will be found, upon the whole, that when the water is warmer than the air, some increase of depression of the horizon may be expected; but that its quantity will be greatly influenced, and in general diminished, by dryness of the atmosphere.

'It appears, however, that no observable regularity is deducible

from the measures above given; but that the quantity, on some occasions, is far different from what the states of the thermometer and hygrometer would indicate. On the 9th of September, for instance, the difference of temperature is only $\frac{1}{2}°$, and the evaporation, to counteract this slight excess of warmth, produced as much as 3° of cold; nevertheless, the refraction visible was full 5′. In this observation I think that I could not be mistaken, as the water was at the time perfectly calm, the air uncommonly clear, and I had leisure to pay particular attention to so unforeseen an occurrence.

'This one instance appears conformable to the opinion entertained by Mr. Huddart, and by M. Monge, that, under some circumstances, the solution of water in the atmosphere causes a decrease in its refractive power; but, on no other occasion have I been induced to draw a similar inference.' P. 7.

'From the foregoing observations we learn, that the quantity of refraction over the surface of water may be very considerable, where the land is near enough to influence the temperature of the air. At sea, however, so great differences of temperature cannot be expected; and the increase of dip caused by this variation of horizontal refraction, it is to be presumed, is not so great as in the confined course of a river; but, if we consider that it may also be subject to an equal diminution from an opposite cause, and that the horizon may even become apparently elevated, there can be no question that the error in nautical observations, arising from a supposition that it is invariably according to the height of the observer, stands in need of correction.

'The remedy employed by Mr. Huddart, of taking two angles of the sun from opposite points of the horizon at the same time, and considering the excess of their sum above 180° as double the dip, must without doubt be effectual; but, from causes which he assigns, it is practicable only within certain limits of zenith distance; for, where the zenith distance is small, and the changes of azimuth rapid, there is required considerable dexterity and steadiness of a single observer who attempts to turn in due time, from one observation to another; and, when it exceeds 30°, the greater angle cannot be measured with a sextant, and consequently his method is, with that instrument, of use only in low latitudes.

'On account of the difficulty attending some of the adjustments for the back observation, he rejects that method for taking angles in general, with much reason; but he has thereby overlooked a means of determining the dip, which I am inclined to think might be employed with advantage in all latitudes, without any occasion to hurry the most inexperienced or cautious observer.

'By the back observation, the whole vertical angle between any two opposite points of the horizon may be measured at once, either before or after taking an altitude. Half the excess of this angle above 180°, should of course be the dip required.

'But, if it be doubtful whether the instrument is duly adjusted, a second observation becomes necessary. The instrument must be reversed, and, if the apparent deficiency of the opposite angle from 180° be not equal to the excess before obtained, the index error

may then be corrected accordingly; and, since the want of adjustment, either of the glasses at right angles to the plane of the instrument, or of the line of sight parallel to it, will affect both the larger and smaller angle very nearly in an equal degree, the ½ part of their difference will be extremely near the truth, and the errors arising from want of those adjustments may with safety be neglected.' P. 9.

'II. A chemical Analysis of some Calamines. By James Smithson, Esq. F.R.S.'

M. Hauy supposed that all calamines were simple calces of zinc, without admixture, except by a small proportion of carbonat of lime; to which he attributed the effervescence occasionally observed. Mr. Smithson has, however, shown the error of this opinion, and pointed out no inconsiderable proportion of carbonic acid and water in many different kinds of calamine. In the electric calamine the carbonic acid is wanting, and about one half consists of quartz.

Mr. Smithson refines perhaps too far, when he would draw conclusions from so few observations. 'It is improbable,' he thinks, 'that the proximate constituent parts of bodies should be united in the very remote relations which the analyses of natural bodies seem to show.' They, on the contrary, appear, in his opinion, to be 'universally fractions of the compound of very low denominators, not exceeding 5.' Water in the calx of zinc seems to be in a state of peculiarly intimate composition, and it is called, by our author, 'hydrat of zinc;' and the whole of the ingredients of this ore appear to be in a state of chemical combination. Mr. Smithson attempts to support the theory, just mentioned, by particular remarks on the proportion of the component parts of the calamines analysed in this paper.

'III. Experiments on the Quantity of Gases absorbed by Water, at different Temperatures, and under different Pressures. By Mr. William Henry. Communicated by the Right Honourable Sir Joseph Banks, K.B. P.R.S.'

'X. Appendix to Mr. William Henry's Paper, on the Quantity of Gases absorbed by Water, at different Temperatures, and under different Pressures.'

The combination of some of the gases with water is sufficiently known; but the affinity of several airs with water has not been generally explained. The quantity of air, also, which will combine with water under different degrees of pressure, has not been clearly ascertained. In wandering over various chemical subjects in the foreign memoirs, and the labours of the chemists on the continent, we have added many facts on this subject; and we lately observe, in the first number of the new volume of the 'Journal de Physique,' some interesting observations on the absorption of air by water,

and on the peculiar elective attraction of the latter to the oxygen of the air, by M. Berger, of Geneva. We may just add, in this place, that, by stagnation over water, hydrogenous gas is reduced to the state of common air; and, by longer continuance, becomes azotic gas.---But to return to the article before us.

In combining carbonic acid gas with water, our author found that the quantity of the residuum greatly lessened the dissolvent power of the latter, and that a greater proportion was dissolved in a given quantity of water, when the quantity of the air, exposed to it, was increased. The increase of the proportion of the latter appeared more effectual than the increase of temperature. Of sulphurated hydrogen gas, 100 parts of water, at a temperature of 55, absorb 86 parts; of nitrous oxyd at 45°, 100 cubic inches take up from 50 to 54. Azotic gas, as M. Berger has also shown, is scarcely soluble; but our author represents hydrogen gas as less so.

'The results of a series of at least fifty experiments, on carbonic acid, sulphuretted hydrogen gas, nitrous oxide, oxygenous and azotic gases, with the above apparatus, establish the following general law, that, under equal circumstances of temperature, water takes up, in all cases, the same volume of condensed gas as of gas under ordinary pressure. But, as the spaces occupied by every gas are inversely as the compressing force, it follows, that water takes up, of gas condensed by one, two, or more additional atmospheres, a quantity which, ordinarily compressed, would be equal to twice, thrice, &c. the volume absorbed under the common pressure of the atmosphere. By frequent repetition of the experiments, I obtained results differing a little from the general principle above stated; but, for all practical purposes, I apprehend, the law has been announced with sufficient accuracy.' P. 41.

In the Appendix, Mr. Henry corrects his former measures; and, of the sulphurated hydrogen gas, states the quantity absorbed by 100 measures of water, at 106 and 108; and of nitrous oxyd 86, at 60°. Of the quantities absorbed by gases which have less affinity to water we shall add the proportions from his corrected table.

'Table shewing the Quantity of each Gas absorbed by 100 Measures of Water, at 60°.

	Actual Absorption.	Inferred Absorption.
Nitrous gas	5	5
Oxygenous gas	3.55	3.7
Phosphuretted hydrogen gas	2.14	
Gaseous oxide of carbon	2.01	
Carburetted hydrogen gas	1.40	
Azotic gas	1.47	1.53
Hydrogenous gas	1.53	1.61' P. 276.

'IV. Experiments and Observations on the various Alloys, on the specific Gravity, and on the comparative Wear of Gold. Being the Substance of a Report made to the Right Honourable the Lords of the Committee of Privy Council, appointed to take into Consideration the State of the Coins of this Kingdom, and the present Establishment and Constitution of His Majesty's Mint. By Charles Hatchett, Esq. F.R.S.'

This is a laborious and very valuable paper, the joint work of Mr. Cavendish, the Newton of modern times, and Mr. Hatchett, drawn up by the latter. We can give no account of it adequate to the merit it possesses, but shall notice the chief results.

The object was to ascertain the state of our present gold coin, and to inquire into the loss which it appeared to have sustained by wear within certain periods.

'Two questions were to be principally decided,

'1st. Whether very soft and ductile gold, or gold made as hard as is compatible with the process of coining, suffers the most by wear, under the various circumstances of friction to which coin is subjected in the course of circulation?

'2dly. Whether coin with a flat, smooth, and broad surface, wears less than coin which has certain protuberant parts raised above the ground or general level of the pieces?

'Concerning the first question, opinions were various, and the most intelligent persons were uncertain whether very soft or hard gold was to be preferred; and, in respect to the second question, it must be observed, that although the prevalent opinion was in favour of flat and smooth surfaces, yet, as the fact had never been fully and satisfactorily determined, this opportunity was embraced, in order that every doubt might be removed.' P. 44.

In this inquiry, they first examined the effect of different alloys; and, from their experiments, have added considerably to our metallurgic knowledge, correcting, at the same time, numerous errors. In general, it appeared that the alloys were separable by fusion; that arsenic, which, on account of its volatility, cannot be easily united with gold, is not only carried off by continued heat, though in a small proportion, as it possesses a strong affinity to gold, but that some portion of the gold escapes with it in vapour. With silver, copper, and tin, there was no loss by fusion; with lead, iron, and bismuth, there was a loss, in consequence of calcination or vitrification; with antimony and zinc, chiefly by volatilisation. Tin, in a small proportion, does not make gold brittle, as has been supposed; but two metals only were found suitable as alloys, *viz.* silver and copper; for gold is changed both in colour and ductility by the necessary admixture of the others. With respect to the diminution of ductility, the different metals seem to act in the following order.

'1. Bismuth.
2. Lead. } These are nearly equal in effect.
3. Antimony.
4. Arsenic.
5. Zinc.
6. Cobalt.
7. Manganese.
8. Nickel.
9. Tin.
10. Iron.
11. Platina*.
12. Copper.
13. Silver.' P. 95.

The various incidental remarks would detain us very long. We may, however, remark that we were considerably instructed by what our author has observed respecting the different kinds of copper.

The second section is on the specific gravity of gold, when alloyed by different metals. We may premise some observations suggested by the introduction to this section. The specific gravity of a compound is not always that which may be supposed to result from the respective densities of the ingredients. It is sometimes less, owing to the little cavities, or air-bubbles; and this inconvenience, except in the brittle metals, may be remedied by rolling or hammering. Yet it is different from another cause, which we are anxious to point out. The union is very often, we dare not say always, a chemical combination: the result is a third body, different from either of the component parts, and its internal organisation may be supposed to differ also from either. In the passage of every body from a state of fluidity to solidity, there is a crystallisation more or less regular, as the cooling has been slower or quicker; and, probably, the arrangement of its crystalline forms may greatly influence the specific gravity of the new body. Thus, it is singular that lead and bismuth with gold, or with copper and gold, produce a mixt metal, similar in specific gravity and some other properties, though lead and bismuth differ so materially from each other. One cause of the great uncertainty in the result of trials respecting the specific gravity of combined metals, is the difficulty of uniting the alloy equally through the whole mass. Even in philosophic experiments, great accuracy in this respect cannot be obtained; and an allowance is made for this inconvenience at the mint. In casting, also, there is a considerable inequality, for

'* Had the platina been quite pure, the compound metal would probably have possessed more ductility; I cannot therefore take upon me to assert positively, that the place here assigned to platina, is precisely that which it ought to occupy.'

the densest part of the ingot is at the bottom; so that a bar may, at each end, be of the same specific gravity, though of different value; for the finer quality of the upper extremity may be compensated by the superior density of the lower. The specific gravity is also increased by rolling, and diminished by annealing, as well as by friction. The last circumstance is singular, and little to be expected. The specific gravity of gold, made standard by silver or copper, or by both united, may vary nearly from 18 to 17.

The third section is 'on the comparative Wear of Gold, alloyed by different Metals.' We cannot analyse it more satisfactorily than the author has done in his own summary.

'From a general view of the present experiments, there does not appear to be any very great or remarkable difference in the comparative wear of the three kinds of standard gold, all of which suffer abrasion slowly, and with much difficulty; and (as it has been already observed) the difference of wear between the two last mentioned, is certainly but inconsiderable. For these reasons, and from the consideration of every other circumstance, it must be evident, that the extraordinary loss which the gold coin of this kingdom is stated to have sustained within a certain limited time, cannot, with even a shadow of probability, be attributed to any important defect in the composition or quality of the standard gold; and all that can be said upon this subject is, that some portion of this loss may have been caused by the rough impression and milled edge now in use, by which, each piece of coin acts, and is acted upon by the others, in the manner of a file.

'The loss thus occasioned cannot however be considerable; for the quality of the present standard gold is certainly that which is well adapted to resist abrasion, especially in the case of the friction of coin against coin; and this is strongly corroborated by the observations of bankers and others, who are in the habit of sending or receiving large quantities of gold coin from any considerable distance. When a number of guineas, rather loosely packed, have been long shaken together by the motion of a coach or other carriage, the effects of friction are observed chiefly to fall upon only a few of the pieces. But it is not a little remarkable, that although these are often reduced nearly or quite to the state of plain pieces of metal or blanks, yet, upon being weighed, they are found to have sustained little or no loss; and from this it appears, that the impressions have been obliterated, not by an actual abrasion of the metal, but by the depression of the prominent parts, which have been forced into the mass, and become reduced to a level with the ground of the coin. Pieces of hard gold would not so easily suffer by depression; but the real loss would probably be greater, they being, in the case of the friction of coin against coin of similar quality, more susceptible of abrasion.

'Upon the whole, there is every reason to believe, that our gold coin suffers but little by friction against itself; and the chief cause of natural and fair wear probably arises from extraneous and gritty

particles, to the action of which the pieces may occasionally be exposed in the course of circulation. But still it must be repeated, that the united effects of every species of friction to which they may be subjected, fairly and unavoidably, during circulation, cannot produce any other wear than that which is extremely gradual and slow, and such as will by no means account for the great and rapid diminution which has been observed in the gold coin of this country.' P. 190.

'V. Observations on the chemical Nature of the Humours of the Eye. By Richard Chenevix, Esq. F.R.S. and M.R.I.A.'

This, which may be styled one of the minor subjects of physiologic consideration, has not been yet satisfactorily examined; and fancy must have given the aqueous humour something of an ethereal nature, when Bertrandi determined its specific gravity to be 975, in other words, less than that of distilled water. In the eyes of sheep, at 60° of Fahrenheit, the aqueous humour is 10090; and it contains, in very minute proportions, albumen, gelatine, and muriat of soda, dissolved in water. The specific gravity of the crystalline is 11000, but it contains no salt. The albumen and gelatine is united with a less proportion of water. As it putrefies rapidly, it must contain a large portion of animal matter, or azote, which our author has not noticed. The vitreous humour is said, in every respect, to resemble the aqueous. The result of the experiments on the humours of the human eye was the same; but the specific gravity of the aqueous and crystalline humours was 10053 and 10790 respectively; in the eyes of oxen 10088 and 10765.

'What is particularly worthy of notice is, that the difference which appears to exist between the specific gravity of the aqueous or vitreous humour and that of the crystalline, is much greater in the human eye than in that of sheep, and less in the eye of the ox. Hence it would appear, that the difference between the density of the aqueous and vitreous humour and that of the crystalline, is in the inverse ratio of the diameter of the eye, taken from the cornea to the optic nerve. Should further experiments show this to be a universal law in nature, it will not be possible to deny that it is in some degree designed for the purpose of promoting distinct vision.' P. 198.

The cataract is owing, in our author's opinion, to the coagulation of the albumen in the crystalline; and, from its connexion with gouty habits, he seems to suspect that the phosphoric acid may have some effect. On the whole, however, this analysis is, in many respects, imperfect; and we wish the author, of whose chemical abilities we have formed an advantageous idea, would resume the subject. Let us only remark, among many observations we might make, that the vitreous humour *must* differ, in some respects, from the aqueous, and

that the cataract is an obfuscation of the mere COAT of the lens.

'VI. An Account of some Stones said to have fallen on the Earth in France; and of a Lump of native Iron, said to have fallen in India. By the Right Honourable Charles Greville, F.R.S.'

The little that this article contains, tends to establish the similarity of the stones said to have fallen from the superior strata of the atmosphere; but we shall, probably, at no great distance of time, have occasion to resume the subject with all the facts regularly before us. The account of the fall of a mass of iron on the earth, from the 'Memoirs of the Emperor Jehangire,' written by himself, is peculiarly curious, and connects the appearances of native iron with the other masses from the atmosphere.

'VII. Observations on the Structure of the Tongue, illustrated by Cases, in which a Portion of that Organ has been removed by Ligature. By Everard Home, Esq. F.R.S.'

Mr. Home's great object, in this article, is to show that the tongue is not peculiarly irritable, as has been supposed. Parts of it, when diseased, have been taken out without inconvenience. A singular case merits particular notice. A person bit his tongue severely. No particular or violent inflammation ensued, but the tip of the tongue continued insensible. Mastication was inconvenient and unpleasant; and the sense of taste was destroyed. It is not, we believe, generally known or acknowledged that the sense of taste resides in the tip of the organ only.

'VIII. Observations of the Transit of Mercury over the Disk of the Sun; to which is added, an Investigation of the Causes which often prevent the proper Action of Mirrors. By William Herschel, LL.D. F.R.S.'

Dr. Herschel's communications are always valuable, even on the minuter branches of the science; and, though we do not now, under his guidance, penetrate the immensity of space, or soar beyond the remoter suns, yet we cannot follow him on any subject without instruction. His observations on the planet Mercury, in its passage over the sun, are chiefly designed to show that the disk of Mercury is perfectly well defined without the smallest suspicion of an atmosphere, either from its appearance on the sun, or in the moment of emerging. It seems not to be flattened at the poles, unless its pole were in the centre, opposite to the eye; which would conceal the difference between the polar and equatorial diameter.

The causes which prevent the proper action of mirrors, are investigated by a series of observations in which this action was defective. They in general meet in the following conclusion, *viz.* 'that in order to see well with tele-

scopes, it is required that the temperature of the atmosphere and mirror should be uniform, and the air fraught with moisture.' Every observation is satisfactorily explained by these causes, which are, perhaps, too much crowded in the theorem, *viz.* the uniformity of temperature and moisture in the air. Every observer knows, that, in the moment of impending rain, the air is peculiarly clear. Another source of improper action of the mirrors is too great heat or cold: the former lengthens the focal distance, the latter shortens it.

'IX. An Account of some Experiments and Observations on the constituent Parts of certain astringent Vegetables; and on their Operation in Tanning. By Humphry Davy, Esq. Professor of Chemistry in the Royal Institution. Communicated by the Right Honourable Sir Joseph Banks, Bart. K.B. P.R.S.'

This article is an excellent one, and displays a very intimate knowledge of all the refinements of modern chemistry on a subject of the greatest importance to the arts. The tanning principle, the *tanin* of the French chemists, is distinguished by its precipitating gelatine, and it hardens leather in consequence of this effect. Our author's first object was the analysis of galls. Five hundred grains of good Aleppo galls gave, by lixiviation with water and subsequent evaporation, 185 grains of solid matter; of which 130 grains were tanin, 12 consisted of mucilage and matter rendered insoluble by evaporation, 31 of gallic acid, and 12 of calcareous earth and saline matter. The fluid obtained by the last lixiviation of galls is of a pale-green colour, owing, in Mr. Davy's opinion, to a gallat of lime.

The next object was the catechu, formerly called terra Japonica. It is procured both from Bengal and Bombay; but these different kinds do not seem to vary in their sensible properties. In their effects on leather, the former appeared the stronger; but, on analysis, 200 grains of the purest catechu, in powder, from Bengal and Bombay, produced respectively of tanin, 109 and 67 grains; of extractive matter 68 and 73 grains; of mucilage 13 and 16; of residuum, chiefly sand and calcareous earth, 10 and 14 grains. The darkest specimens contained most tanin; the lightest most extractive matter. From the more miscellaneous analyses we shall select the following passage.

'The experiments of Mr. Biggin have shown, that similar barks, when taken from trees at different seasons, differ as to the quantities of tannin they contain: and I have observed, that the proportions of the astringent principles in barks, vary considerably according as their age and size are different; besides, these proportions are often influenced by accidental circumstances, so that it is extremely difficult to ascertain their distinct relations to each other.

'In every astringent bark, the interior white bark (that is, the part next to the alburnum) contains the largest quantity of tannin. The proportion of extractive matter is generally greatest in the middle or coloured part: but the epidermis seldom furnishes either tannin or extractive matter.

'The white cortical layers are comparatively most abundant in young trees; and hence their barks contain, in the same weight, a larger proportion of tannin than the barks of old trees. In barks of the same kind, but of different ages, which have been cut at the same season, the similar parts contain always very nearly the same quantities of astringent principles; and the interior layers afford about equal portions of tannin.

'An ounce of the white cortical layers of old oak bark, furnished, by lixiviation and subsequent evaporation, 108 grains of solid matter; and, of this, 72 grains were tannin. An equal quantity of the white cortical layers of young oak produced 111 grains of solid matter, of which 77 were precipitated by gelatine.

'An ounce of the interior part of the bark of the Spanish chesnut, gave 89 grains of solid matter, containing 63 grains of tannin.

'The same quantity of the same part of the bark of the Leicester willow, produced 117 grains, of which 79 were tannin.

'An ounce of the coloured or external cortical layers from the oak, produced 43 grains of solid matter, of which 19 were tannin.

'From the Spanish chesnut, 41 grains, of which 14 were tannin.

'And, from the Leicester willow, 34 grains, of which 16 were tannin.' P. 264.

'Of the entire barks, the oak produced, in the quantity of an ounce, 61 grains of matter dissolved by water, of which 29 grains were tannin.

'The Spanish chesnut 53 grains, of which 21 were tannin.

'And the Leicester willow 71 grains, of which 33 were tannin.

'The proportions of these quantities, in respect to the tanning principle, are not very different from those estimated in Mr. Biggin's table.

'The residual substances obtained in the different experiments, differed considerably in their properties; but certain portions of them were, in all instances, rendered insoluble during the process of evaporation. The residuum of the chesnut bark, as in the instance of the strongest infusion, possessed slightly acid properties; but more than $\frac{3}{4}$ of its weight consisted of extractive matter. All the residuums in solution, as in the other cases, were precipitated by muriate of tin; and, after this precipitation, the clear fluids acted much more feebly than before on the salts of iron: so that there is great reason for believing, that the power of astringent infusions to precipitate the salts of iron black, or dark coloured, depends partly upon the agency of the extractive matters they contain, as well as upon that of the tanning principle and gallic acid.' P. 266.

An ounce of the bark of the elm gave 13 grains of tanin; of the common willow, 11 grains; of Sicilian sumach, 78;

of Malaga sumach, 79; of souchong tea, 48; and of green tea, 41 grains. Tanin exists also in the juice of sloës, and in Port-wine.

These experiments contain many minute circumstances, of considerable importance to the chemical history of tanin, and the analysis of astringent substances, which we cannot enumerate. Some observations respecting its affinities we shall select.

'In making some experiments upon the affinities of the tanning principle, I found that all the earths were capable of attracting it from the alkalis: and, so great is their tendency to combine with it, that, by means of them, the compound of tannin and gelatine may be decomposed without much difficulty; for, after pure magnesia had been boiled for a few hours with this substance diffused through water, it became of a red-brown colour, and the fluid obtained by filtration produced a distinct precipitate with solution of galls. The acids have less affinity for tannin than for gelatine; and, in cases where compounds of the acids and tannin are acted on by solution of gelatine, an equilibrium of affinity is established, in consequence of which, by far the greatest quantity of tannin is carried down in the insoluble combination. The different neutral salts have, comparatively, feeble powers of attraction for the tanning principle; but, that the precipitation they occasion in astringent solutions, is not simply owing to the circumstance of their uniting to a portion of the water which held the vegetable substances in solution, is evident from many facts, besides those which have been already stated. The solutions of alum, and of some other salts which are less soluble in water than tannin, produce, in many astringent infusions, precipitates as copious as the more soluble saline matters; and sulphate of lime, and other earthy neutral compounds, which are, comparatively speaking, insoluble in water, speedily deprive them of their tanning principle.

'From the different facts that have been stated, it is evident that tannin may exist in a state of combination in different substances, in which its presence cannot be made evident by means of solution of gelatine; and, in this case, to detect its existence, it is necessary to have recourse to the action of the diluted acids.' P. 269.

M. Seguin supposes, that, in the process of tanning, the gallic acid is absorbed, and the leather de-oxygenated; but this theory is, in Mr. Davy's opinion, without sufficient foundation. In tanning, some portion of extractive matter is absorbed, and adds to the durability of the leather. Where the tanin is in larger proportion, and the extractive matter in a less, the leather is hard, and liable to crack. Slow tanning, as it favours the union of extractive matter, is preferred by our author. In strength, half a pound of catechu seems to be equal to four or five pounds of oak-bark.

In the 'Meteorologic Journal,' the range of the thermometer was from 82° (more probably from 75°) to 15°, the

mean about 50°: the mean heat of April 51°. The barometer from 30.48 to 29.07; the mean, 29.91. The hygrometer was from 94 to 55; the mean, 76.3. The rain, 13.946 only!

ART. V.—*Amadis de Gaul; a Poem in three Books; freely translated from the first Part of the French Version of Nicolas de Heberay, Sieur des Essars; with Notes. By William Stewart Rose, Esq.* 8vo. 7s. *Boards.* Cadell *and* Davies. 1803.

IN 1560, Bernardo Tasso, the father of a still more celebrated poet, published at Venice a metrical translation of Amadis, under the title 'Amadigi.' It consists of one hundred cantos, and more than seven thousand staves; and, like his 'Floridante,' was a popular poem in Italy, according to the account of Lodovico Dolce, even after the Italians had seen the superior efforts of his son.

The fable, however, of this celebrated romance is not remarkably adapted for the purposes of the epic poet. There is no singleness of end and aim in the conduct of the hero, no steady, persevering, skilful, daring pursuit of some one great and important achievement. The incidents are successive adventures, not portions of a progressive event. In the Iliad, and still more in the Jerusalem Delivered, every combat is a part of the main action; it affects the relative situation of the conflicting parties; it endangers the dispersion, or consolidates the confidence, of the besiegers; it excites not only personal hopes and fears for the antagonists, but a mightier solicitude for the fortunes of the enterprise itself. But, in the life of Amadis, almost any one prominent circumstance might be omitted without being missed: each is insulated and unconnected; one adventure precedes, but does not prepare for the next; and although each is marvellous and impressive, and affords occasion for splendid description, yet the result of relating them is likely to produce a mass, and not a whole; arms and legs, and trunk and head, but no entire body; a file or knot, rather than a groupe, of champions; a tale more of bustle than of business.

There is another fault in most of these biographic fables: we hardly preserve a sentiment of the hero's identity. In the first book Amadis is exposed an infant in a sort of floating cradle; in the second, he is in love with Oriana, and kills king after king. Now it is with epic as with dramatic poetry. So long as the imagined appearance, and disposition, and master-passion, of the heroes can, with probability, remain the same, so long we are content the poet should busy us with their affairs. The duration of the long action is not dis-

pleasing in Macbeth, or Fiesco; in the Jerusalem Delivered, or the Oberon; but it sensibly offends in the Æneïd, and in the Orlando; in the Winter's Tale of Shakspeare, and in the Cid of De Castro; because a revolution actually takes place in the body or mind, which changes the pursuits and objects of the personages. In the drama, says Boileau, and justly, we cannot bear to see the hero---

'Enfant au premier acte, et barbon au dernier:'

but this dislike does not originate in its being a violation of the unity of time; it originates in its being inconsistent with the unity of action. It is a doctrine, therefore, as applicable to the *epopœia* as to the stage.

In order to have brought the fable of his Amadis within due compass, Mr. Rose should have begun with the arrival of the full-grown Amadis at the court of Perion and Elisena. The narrative of his education and previous adventures should have given occasion to the very interesting and pathetic interview in which he is discovered to be their son. In the course of these adventures, he should already have been brought acquainted with Oriana, and owe, to his new rank and station, the means of her deliverance and possession. All this *rounding* of the fable might have been accomplished with little transposition, and with little omission, of the more familiar and prominent incidents; no one of which ought to be dropped without strong reasons for its suppression.

As to the characters, they are, perhaps, incapable of very discriminate evolution in a romance of chivalry. Every knight is brave, and in love; one may be humane like Amadis, another cruel like Arcelaus; this may be constant like Amadis, that versatile like Galaor; but the possible varieties are not great. Ariosto is encumbered with too many personages to characterise each knight with peculiarity: it is a merit of the story of Amadis that it does not require a numerous band of heroes. These few, however, should have been marked with dispositions of a more distinct contour than Mr. Rose has chosen to impress.

The translator's style has the same fault as that of Way's 'Fabliaux;' it is neither of one age nor of another; it is a mosaic, whose cement is a modern patent-varnish, whose inlay is a rubbish of *giallo-antico*, rusty-iron, and French porcelain. The basis of the English language is a Gothic dialect: hence all words of Saxon derivation have the national physiognomy about them; the air of natives. These words, when forgotten, may freely be revived; when wanted, may freely be introduced. The old French words, on the contrary, which, from the Norman conquest, till the introduction of protestantism, were so pro-

fusely and officiously used by all our professional men and almost all our authors, are not natural to our language, nor akin to the received stock of terms: when once obsolete, they will seldom bear revival. Protestantism exploded the Norman or Frenchified English, and restored the ancient vulgar dialect to the rank of a national language, by introducing it both into our worship and our literature. We have since taken many words directly from the Latin and the Greek; but we have banished more French words than we have invited. In attempting to form a sort of English *Gaulois*, which, by its antiquated yet interesting simplicity, should seem to be the appropriate dress, the natural *costume*, of a tale of chivalry, attention should be paid to this irresistible tendency of our language. Not all the words in the glossary to Chaucer can be restored to circulation: the Saxon terms have the best chance: of the French only the technical may be retained; the names of pieces of dress and armour, now in use no more. The modern Latin terms of the language must studiously be avoided, although familiar; they are like new purple patches on an old garment, which disguise its fashion and reveal its shabbiness.

We shall extract from this metrical chronicle the account of a night and a day spent by Amadis.

'Now sunk the sun; and from the distant sky
Deep thunders roar, the echoing hills reply:
Nearer and nearer bursts the deafening crash,
Athwart the lurid clouds red lightenings flash:
A deluge swift succeedes: the knight to speed
With goring spur provokes his restive steed.
When, gleaming thro' the woods, a blaze of light
To a proud castle guides his eager flight:
Gay glittering forms across the casements glance,
And loud resounded revelry and dance.
Long at the gates he shouted; in the sound
Of mingled dance and song his cries were drown'd.
At length a voice: "I wot some craven knight,
Some losel vile, that fears the face of light.
Hence from my gates! hence while unscath'd ye may!
And bless thy dole that sent thee not by day!"
"Caitiff accurs'd!" made Amadis reply,
"Bereft of grace, devoid of courtesy,
Swift let thy blazing torches lend their light,
And take my fierce defy to mortal fight."
"Bethinks me, sir," the taunting churl replied,
"More ire than wit thy random speech doth guide,
With screech-owls, and ill-omen'd birds of night
I wage not, I, unprofitable fight.
But, so it please thee, ill-advis'd, remain;
Here bide the piercing cold, and pelting rain;

And, eftsoons as Aurora's dawning light
Shall serve to guide my conquering sword aright,
Long wish'd for tho' it come, I ween, the day
Shall ill thy night's bad harbourage repay.
Now hold thine host excus'd, if he retire
To lead the festive dance, to joy the lyre,
And with fair dames the spicy goblets quaff."
He said; and ended with a churlish laugh.
Then from the window turn'd: the casement clos'd
To the fell tempest left the knight expos'd.
Wood wax'd Sir Amadis; but, deeming vain
All hopes of instant vengeance, turn'd the rein.
Long thro' drear wilds the weary knight did fare;
Till the red lightening's momentary glare
Bewray'd two gay pavillions to his view.
Admonish'd by the spur, his courser flew.
Him, lighting from his sell, with welcome sweet
And hospitable cheer, two damsels greet.
The feast remov'd, to his fair hosts the knight
Relates the castellan's discourteous slight.
To him the damsels; "Dardan is his name,
Not Britain, grac'd with chiefs of mightiest fame,
Contains within her wide domain a knight
So strung for toil, so matchless in the fight.
Hence fair Lycena's grief. A dame, whose charms
Bless the ferocious Dardan's circling arms,
Bids him her right in listed field maintain
To wrong'd Lycena's fiefs and wide domain.
The king commands the dame, so will the laws,
To some bold champion's arm confide her cause:
But, tho' each breast in secret owns her right,
Each craven soul disclaims the proffered fight."
"Grammercy, lovely damsels! on her side
Lo, here I vow the strife," the knight replied;
"This trusty brand, I trow, shall venge my shame,
And vindicate the wrong'd Lycena's claim."
With generous transport fir'd, the lovely pair
Heard their young guest his bold intent declare.
To Windsor's towers they vow'd to guide his way;
There Lisvard's hest had fix'd the dire affray:
Thither themselves were bound, when Phœbus' light
Should serve to guide their doubtful course aright.
Then, done due courtesies, with toil opprest,
The knight and friendly damsels sunk to rest.' P. 130.

Of this passage the earlier lines are completely modern: the conversation of the knights is almost unintelligibly antique: the line

'And eftsoons as Aurora's dawning light'

is not metrical: the lyre was not in use during the age of chivalry: Amadis's patient procrastination of revenge is scarcely

spirited enough for a knight: the words *lurid*, *momentary*, *unprofitable*, *circling*, *admonish'd*, *ferocious*, *vindicate*, &c. belong to the modern style: the words *craven*, *losel*, are not revivable, because abuse makes no impression which is not understood: *wood (furious)*, and *sell (saddle)*, are not revivable, because liable to be confounded with words in common use of very different meaning. Several of the proper names, although they occur in the Portuguese romance, ought to have been changed, because they are geographically improbable: although the ignorance of Lobeira's readers might not have been alarmed, this is no reason for exercising the indulgence of an English reader. There is much bad grammar: I *wot*, here used as a present tense, is the past tense of to *weet*, or to *wit*, to know. *Bethink* is never a verb impersonal. *Eftsoons* is an adverb absolute, signifying *swiftly as an eft:* it cannot be followed by *as*. *To joy* is not a verb active, and cannot govern *lyre*. The *casement clos'd* for the *clos'd casement* is not an allowable, because an equivocal, transposition. *Discourteous*, though received by Johnson, is not a very defensible substitute for *uncourteous*. *So matchless*---does matchless admit of degree? In the versification there are many *splines*. This word is, perhaps, not universally understood: it is the technical translation of the French *cheville*. When there is a gap, chink, or rift, in the wainscot, which a carpenter is employed to fill up, he cuts a lath to the length of the aperture, planes it to the right width, and inserts it. Such inserted bits of wood, contrived to fit a given vacancy, are called *splines*, or *chevilles;* and those hemistichs, and shorter portions of lines, which are inserted by poets merely to eke out the metre, or to provide the requisite rime, are, by analogy, called, among the French critics, *chevilles*. Why may not we call them *splines?* It is one of the most important secrets of versification to shape one's splines dexterously, and in a workmanlike manner; to make the after-insertions appear like a part of the original conception; to inlay epithets and dovetail hemistichs together without the appearance of thwarting the grain, or interrupting the veins of the wood. The following are awkward splines, not fitted in neatly:---*The echoing hills reply*---*That fears the face of light*---*Ill-advis'd*---*Graced with chiefs of mightiest fame*---*With toil oppress.*

If this captious sort of criticism were extended to a whole book of the poem, we should make our readers believe that it is a very bad one; yet it is because we do not think it incorrigible that we have given the author a specimen of the sort of severity which we wish him to exercise on himself. The scourges of criticism should be actively used by voluntary flagellants, and cautiously inflicted by public disciplinarians.

In refashioning this pleasing poem---for we think it might yet be rendered an ornament to our national literature---surely it would be worth while to recast the couplets into stanzas. There is a fatiguing uniformity in the couplet, which is little perceived in a short effort, in a satire, a heroid, or even a tale; but which, in a long work, as in Pope's Iliad, for instance, wearies the most passive perseverance, and palls on the most greedy taste. Stanzas, on the contrary, by distancing the rimes, conceal the iterated recurrence of *flight, light, might, knight,* and those other hackneyed endings, which threaten the reader, not in vain, with sleep. In stanzas Amadis was originally sung; in stanzas the more celebrated metrical romances have been composed; so that an association of congruity, an opinion of the aptness of that dress, already exists. The Tasso of Fairfax retains a hold which the couplets of Hoole have lost. Blank verse seems to require a stalking stateliness of tone, at variance with half the topics of a metrical romancer.

The preface and notes display an attentive perusal of that literature most conducive to the writer's object. The traditional achievements of the heroes of chivalrous romance should all be studied by the poet who intends to immortalise any one. He will often find incidents worthy of transplantation, or manners evolved in circumstances, which he has to feign; and, above all, he will observe that main drift of exploit in which the peculiar character of the heroic age of the modern world consists. He will also sometimes want to allude to the adventures which may have stimulated the early ambition of his own knights; and to render his very inventions poetically probable, by making them consistent with the established fictions of others.

This poem will derive a welcome illustration from Mr. Southey's excellent abridgement of the original Amadis, and will contribute to prepare for 'The Child of the Sea' an extensive and enduring popularity in Britain.

ART. VI.---*Amadis of Gaul, from the Spanish Version of Garciordonez de Montalvo, by Robert Southey. 4 Vols.* 12*mo.* 1*l.* 1*s. Boards.* Longman *and* Rees. 1803.

IN the sixth chapter of Don Quixote, the curate and the barber undertake a scrutiny of the courteous knight's library, and condemn to the flames those books which were thought to have affected his intellects. A few, however, were held worthy of a better fate, than to increase the bonfire in the court; and among these were the four volumes of Amadis of Gaul, which Nicolas had heard say was the first book of chivalry printed in Spain, and which he is for condemning, as the foundation of a mischievous

system; but which the barber saves, because it is the best of the kind that had yet been composed, and *unico en su arte*—a matchless work.

A French translation of Amadis was first made by Nicolas d'Herberay, who, in 1540, began the publication: this was afterwards prolonged to four-and-twenty books, by the additional adventures of Esplandian, Florisando, Lisuarte, Perion, Florisel, the Amadis of Greece, Roger of Greece, and Silvio de la Silva. From the French it was translated into German, and published in folio in 1583. The old English version, by Munday, is dated 1618. The earliest abridgement is that of mademoiselle de Lubert.

Count Tressan modernised this and other romances of chivalry in a manner which rendered them popular novels at Paris. His delineation of queen Brisena was made to reflect a flattering likeness of the dauphiness Marie Antoinette: but he grossly violated the costume of manners and opinions, in order to introduce stimulant allusions to the personages and literature of his own times (1770 to 1780). The court of France gave a fashion to his publication; and three thousand copies were dispersed through the genteelest book-cases in Europe. Tressan pretends to prove that the original Amadis was written in what he calls the *Picard* language; that is, the Welsh *patois*, common to the opposite coasts of Brittany and Cornwall. Had it been a story-book about Arthur, one would have listened with credulity; but every symptom points to a southern origin.

'Had the comte de Tressan' (says Mr. Southey in his most learned and interesting preface) 'been versed in Portugueze literature, he might have found one single evidence in favour of his assumption. In the "Agiologio Lusitano," t. 1, p. 480, Joze Cardoso says, that *Pedro* de Lobeira translated the history of Amadis de Gaul from the French language, by order of the infante Dom Pedro, son of king Joam I. He calls him *Pedro*, says Barboza, that he may be wrong in every thing. The first volume of the "Agiologio" was printed in 1652. With this single exception, the Portugueze have always ascribed the work to Vasco Lobeira; and the authority of this tradition would alone outweigh all the possibilities of the French writer. It is substantiated by the work itself, and by old and unquestionable testimony.

'At the end of the 41st chapter, vol. 2, p. 42, it is said, that Briolania would have given herself and her kingdom to Amadis, but he told her right loyally how he was another's. In the Spanish version, ff. 72, this passage follows, "But though the infante Don Alfonso of Portugal, having pity upon this fair Damsel, ordered it to be set down after another manner, that was what was his good pleasure, and not what actually was written of their loves; and they relate that history of these loves thus, though with more reason faith is to be given to what we have before said. Briolania

being restored to her kingdom, and enjoying the company of Amadis and Agrayes, persisted in her love: and seeing no way whereby she could accomplish her mortal desires, she spake very secretly with the damsel to whom Amadis, and Galaor and Agrayes had each promised a boon if she would guide Don Galaor where he could find the Knight of the Forest. This damsel was now returned, and to her she disclosed her mind, and besought her with many tears to advise some remedy for that strong passion. The damsel then in pity to her lady, demanded as the performance of his promise from Amadis, that he should not go out of a certain tower, 'till he had a son or daughter by Briolania; and they say, that, upon this, Amadis went into the tower because he would not break his word, and there because he would not consent to Briolania's desires he remained, losing both his appetite and his sleep, 'till his life was in great danger. This being known in the court of king Lisuarte, his lady Oriana, that she might not lose him, sent and commanded him to grant the damsel's desire, and he having this command, and considering that by no other means could he recover his liberty or keep his word, took that fair queen for his leman, and had by her a son and a daughter at one birth. But it was not so, unless Briolania seeing how Amadis was drawing nigh to death in the tower, told the damsel to release him of his promise, if he would only remain 'till Don Galaor was arrived; doing thus, that she might so long enjoy the sight of that fair and famous knight, whom when she did not behold she thought herself in great darkness. This carries with it more reason why it should be believed, because this fair queen was afterwards married to Don Galaor, as the fourth book relates."

'Here then it appears that an infante of Portugal commanded some alteration to be made in the story: because he was displeased that Briolania should love in vain. There exists a sonnet ascribed to an infante of Portugal, and addressed to Vasco Lobeira, praising him as the author of Amadis, and objecting to this very part of the story. It is thus printed in a work entitled "Obras ineditas dos nossos insignes Poetas dadas a luz por Antonio Lourenço Caminha. Lisboa 1791.

'SONETO.

'Feito polo Senhor Infante Dom Pedro, Filho do Senhor Rey Dom Joam primeiro. Outros dizem que he do Senhor Rey Dom Affonso quarto, mais provase que foi do antecedente, porque o Lubera morreo no anno de 1403.

'Bom Vasco de Lubera, e de graõ sem
De pram que vos avades bem contado
O feito de Amadis o namorado,
Sem que dar ende por contar irem,
E tanto vos apprôve, e a tambem,
Que vos seredes sempre ende loado.
E antre os homes hos por homẽtado,
Que vos eraõ adiante, e que era bem.
Mais porque vos fizeste a formoza

Brioranja amar endoado hu nom,
Esto cõbade, e contra sa amarom vontade:
Ca eu hey graõ formozura, e sa bondade,
E hor porque alfim amor no lho paragaõ.

Tom. 1. 213.

"In the reign of Joam I. says Manuel de Faria y Sousa, the infante Don Pedro wrote the sonnets 'Bom Vasco' &c. 'Vinha Amor' &c. in praise of Vasco Lobeira, the inventor of the books of chivalry by that of Amadis." I know not where the second of these sonnets is to be found, neither of them are among the infante Dom Pedro's poems published by Joseph Soares da Sylva at the end of his "Memorias para a Historia del Rey Dom Joam I." as copied from the "Cancioneiro of Resendé; nor do I recollect them in that very rare and valuable collection, to which I cannot now refer. But it is impossible that this sonnet should have been written by either of the princes to whom it has been ascribed. The infante Dom Pedro was but in his eleventh year when Vasco Lobeira died, and Lobeira himself must have been a boy at the time of Alfonso the IVth's death. Montalvo and Manuel de Faria and the Portugueze editor are in this point all in the wrong. If it be the composition of a royal or of a princely author, it must be king Pedro. This however must remain uncertain. But we may believe what Montalvo tells us, that the story had been altered in compliance with the taste of some noble Portugueze. The language of this sonnet is certainly as old as the time of Joam I. It agrees with the opinion of the person whom Montalvo calls the infante Alfonso, and it addresses Vasco Lobeira by name as the author of Amadis of Gaul.

'This evidence is sufficiently decisive. It is incontrovertibly confirmed by Gomes Eannes de Zurara, in his "Chronica do Conde Dom Pedro de Menezes;" a work written in 1463, and first published in the "Collecçaõ de Livros Ineditos de Historia Portugueza, 1792." He expressly says that Vasco Lobeira wrote the book of Amadis, and that the whole was his own invention. Could he have foreseen that it would have ever become a subject of controversy, his testimony could not have been more decisive. "Jaa seja, que muitos autores cobiçosos d'allargar suas obras, forneciam seus livros recontando tempos que os principes passavam em convites, e assy de festas, e jogos, e tempos allegres, de bue se nom seguia outra cousa, se nom a deleitaçaõ delles mesmos, assy como som os primeiros feitos de Ingraterra, que se chamava Gram Bretanha, e assy o livro d'Amadis, como quer que soomente este fosse feito a prazer de hum homem, que se chamava Vasco Lobeira, em tempo d'El Rey Dom Fernando, sendo toda-las cousas do dito livro fingidas do autor." T. 2. p. 422.

'Therefore it can no longer be doubted, that Vasco Lobeira is the author of Amadis of Gaul. The romance was written towards the close of the fourteenth century; if in Fernando's reign, before 1383, but certainly after Edward III. had laid claim to the crown of France, and when the court of Windsor was the most splendid in Europe. This is evident from the work itself. Had it been

written later, even by one generation, Montalvo could not have complained of its rude and ancient style.

'Barboza says the original work was preserved in the family of the Aveiros. If this copy has escaped the earthquake, it may probably be traced from the wreck of that family; and it is greatly to be wished that the Royal Academy of Lisbon would publish it for the honour of Portugueze literature, to which that academy has already rendered such essential services, and which by other nations is little valued, only because it is little known.' Vol. i. p. iv.

Mr. Southey's epitome is not from the Portuguese original, but from the Spanish version by Garçia Ordonnez de Montalvo, of Medina del Campo, where probably the first edition made its appearance about 1510;—the older edition of Seville is dated 1526, and the newer, 1547. This abridgement is the work of a superior hand. The incidents were marvelous and impressive, but they were too successive and trailing: by the omission of merely expletive circumstance, and of idle circumlocutory dialogue, the requisite throng and pressure of event is attained, attention kept awake, and curiosity on the stretch. Traits of sentiment and character of the age and country, picturesque accidents of scenery or action, are carefully preserved; what delicacy forbade to reprint, is carefully suppressed. It deserves to become the model of future similar abstracts, from its excellency of abbreviation; for it consults every purpose of convenient amusement, while it preserves for the philosopher and the historian all they can hope to learn of the manners and the times.

The style is in costume; it has that quaint unaffectedness of character which reminds of the inartificial manner of the early chroniclers, but which is itself less natural to us now, than phrases of a more various and more sweeping march. The second chapter narrates an interesting discovery.

'It so happened, that as he was one day walking in the hall with the damsel, young Melicia, king Perion's daughter, past by him weeping. He asked her why she wept, and she told him for a ring, which her father had given her to keep while he slept, and which she had lost. I will give you another as good, said the child, and he gave her one from his finger. She looked at it, and cried, this is the one I lost. Not so, said he.—Then it is the one in the world most like it. So much the better: you may give it for the other. And, leaving her, he went with the damsel to his chamber, and laid [*lay*] upon his bed, and she upon another that was there.

'The king awoke, and asked his daughter for the ring; then gave she him the same she had of the prince, which he put on, thinking it was his own; but presently he saw his own lying where Melicia had dropt it, and taking it up he compared it with the other, which he then saw was the one which he had given to Elisena, and which she told him, when he had enquired for it, had been lost. He demanded of the little girl how she came by that

ring; and she, who was much afraid of him, told him what had happened. Immediately he began to suspect the queen, that she had fallen into some dishonest liking of the young knight for his great worth and exceeding beauty; and he took his sword, and went into the queen's chamber, and fastened the door. Madam, said he, you always denied to me the ring which I gave you, and the Child of the Sea has now given it to Melicia! How came he by it? if you tell me a lie, your head shall pay for it. Ah God, mercy! quoth Elisena, and fell at his feet. I will tell you what I have hitherto concealed, but now you suspect me! And then she told him how she had exposed the infant, with whom the ring and the sword were placed; and then she lamented, and beat her face. Holy Mary! cried the king, I believe that this is our child! The queen stretched out her hands,—may it please God! With that they went into his chamber, whom they found sleeping; but Elisena wept bitterly because of her husband's suspicion. The king took the child's sword which was at the bed's-head, and looking at it he knew it well, as one wherewith he had given many and hard blows; and he said to Elisena, By my God I know the sword! Then Elisena took the child by the arm, and wakened him, who awoke in wonder, and asked her why she wept. Ah! said she, whose son art thou?—So help me God I know not, for by great hap I was found in the sea! The queen fell at his feet, hearing him, and he cried, My God! what is all this? My son, quoth she, you see your parents!

'When the first joy had a little subsided he remembered the writing, and took it from his bosom. Elisena saw it was what Darioletta had written. Ah, my son, quoth she, when last I saw this writing I was in all trouble and anguish, and now am I in all happiness,—blessed be God!

'It were long to tell what joy Agrayes made and the lords of the realm at this discovery. The damsel of Denmark could now no longer abide. Sir Amadis, said she, I will go carry these good tidings to my lady, for you must tarry to give joy and gladness to those eyes that have shed so many tears for your sake. God have you in his keeping! replied Amadis. I shall soon follow, and will come in arms like those I wore against king Abies, so shall ye know me.

'At this time would Agrayes also depart; for the damsel, when she brought him Galpano's helmet, came with a message from his mistress, Olinda, daughter to king Vanayn of Norway, desiring to see him with all convenient speed. He had won her love when he was with Galvanes in that kingdom. Now Galvanes was his uncle, and because he had only one poor castle to his heritage, they called him Lackland. Cousin, said Agrayes, I desire your company above all other things, but I must now go where my heart leads me. Where shall I find you on my return? In the house of king Lisuarte, said Amadis, for there they tell me is chivalry more worthily maintained than in the house of any other king or emperor in the world; and I pray you commend me to your parents, for they as well as you may ever esteem me in their service for the education they gave me. This said, Agrayes took leave of the queen his

hunt, and departed with his company. The king and Amadis conducted him through the city. As they were going out of the city-gate, they met a damsel who took Perion's bridle, and said to him, King Perion, remember what thou wert told,—how, when thou didst recover thy loss, the kingdom of Ireland should lose its flower. See now if the damsel told thee true! for thou hast found thy son who was lost; and that brave king Abies is slain, who was the flower of Ireland. And now I tell thee, that never shall that country have his like, till the good brother of the lady shall come, who shall proudly and violently make the tribute of other lands be brought there, and he shall die by the hands of him who must perish for the thing in the world that he loves best. This was Marhaus of Ireland, brother to the queen, whom sir Trystram de Lyons slew on the quarrel of tribute demanded from king Mark of Cornwall, and Trystram himself was slain afterward because of queen Isoude, who was the thing in the world that he loved best. And this, said the damsel, my mistress Urganda sends me to tell thee. Then, said Amadis, damsel and my friend, say to her who sent you, that the knight to whom she gave the lance commendeth himself to her good grace, being now assured in the matter whereof then she spake, that with that lance I should deliver from death the house from whence I sprung, for I saved with it the king my father. So the damsel returned, and Agrayes went his way.

'Then king Perion summoned a *cortes*, that all might see his son Amadis; and then were great rejoicings and pastimes made in honour of the lord whom God had given them, and many things were done in that *cortes*, and many and great gifts did the king bestow. And when Amadis heard how the giant had carried away his brother Galaor, he determined to seek him, and recover him by force of arms or otherwise. When the *cortes* was ended, he requested his father permission to go to Great Britain. Much did the king and queen labour to detain him, but it might not be by reason of the love he bare, which made him obedient to none but his lady. So he clad himself in harbour like that which Abies had destroyed in the combat, and taking none with him but Gandalin set forth. They proceeded till they came to the sea, then entered a vessel, and sailed to a goodly city in Great Britain, which is called Bristol. Here he learnt that king Lisuarte was at his town of Windsor, whither he shaped his course; but far had he not gone when he met a damsel, who demanded of him if that were her ready way to Bristol, and if she could find shipping there for her speedy passage into Gaul. Whom seek you there? said he.—The good knight Amadis, who is the king's son, and has not long known his father. Greatly did Amadis marvel thereat, and he asked her from whom she heard thereof. I know it, quoth she, from her to whom nothing is hidden, from Urganda the Unknown, who now stands in such need of him, that by no other can she obtain what she desires. Thanks to God! replied Amadis, she who can assist all, now requires me to assist her. Let us go, for I am the man whom ye seek. And he forsook his road, and followed her.' Vol. i. p. 90.

This chapter contains complete proof that Amadis, although perhaps the first Portuguese or Spanish romance of chivalry, is itself but an imitation of Sir Trystram and other similar compositions here quoted. We are tempted to wish, that, to these earlier romances also, the honour of republication may be extended. The mythologic records of our heroic ages will be found to conceal some historic facts, to preserve many ethic peculiarities of our forefathers, and to form the only mine out of which future epic poets may hope to draw a fable adapted for European celebrity and interest. The story-books of chivalry are the sole common stock of heroic exploit, to which every modern nation has in turn devoted its attention. Unknown heroes do not interest. Achievements must be associated in the memory with great names and famous places, in order to make an impression of reality on the imagination. Illusion, such as an epic poet or a dramatist needs, cannot be superinduced through the medium of fictitious personages, here unknown to narrative and song, such as a Sir Guyon, or Artegal, or the Orphan of China. All works of art have been most successful, which connect their own celebrity with that of some previously distinguished event. The poet should not make his hero famous, but take him because he has become so. Let us prepare, then, for the artist his necessary road, by recalling to popular attention those *gestes* of our forefathers, which the patriotism of the antiquary, which the fancy of the poet, has insatiately fed on so long. These heroic romances are far worthier to amuse the reading world, than the mawkish novels in which it professes to delight. In some propitious hour, they will fall into the hands of young Genius meditating enterprise; and they will, here too, inspire the efforts of an Ariosto or a Wieland.

ART. VII.—*Travels in Turkey, Asia-Minor, Syria, and across the Desert into Egypt during the Years* 1799, 1800, *and* 1801, *in Company with the Turkish Army, and the British Military Mission. To which are annexed, Observations on the Plague, and on the Diseases prevalent in Turkey, and a Meteorological Journal. By William Wittman, M. D. &c. 4to. 2l. 12s. 6d. Boards.* Phillips. 1803.

THE tale of Egypt has no longer novelty or interest to recommend it: it has been often told; and genius must enliven the narrative, or new discoveries awaken curiosity, to re-excite the public attention. Dr. Wittman has neither of these advantages; and the little that he could, for the first time, have told, policy has, with great propriety, suppressed. Sir

Robert Wilson, early in the field, attracted our curiosity by his military details; and, about the same time, Denon supplied what Pocock and Norden were not able to investigate with accuracy, what Savary never saw, and Volney more openly copied from others: lieutenant Anderson compiled with attention the 'Official Journals;' and captain Walsh, with slower and more guarded steps, contributed, very satisfactorily, minuter circumstances, and fixed our meditation by more precise scientific descriptions of the spot and the events connected with it. Such was the state of public information when the present work appeared. It is evident, therefore, that scarcely a niche remained unfilled, a spot undescribed; and, even in the author's immediate profession, the little which his limited experience could supply, has been repeatedly offered by preceding travellers.

Our readers will recollect, that, a short time previous to the Egyptian expedition, some artillery-officers and engineers were sent to Turkey, to instruct the Turkish cannoneers. Dr. Wittman was physician to the expedition, which he styles, perhaps improperly, the 'mission,' as this term is, by common consent, appropriated to religious enterprises. His residence in Turkey, his voyage to Syria, and the encampment at Jaffa, previous to the march of the Turkish army to Egypt, form the most interesting parts of his work. The description of Egypt is much more full and satisfactory in the authors already mentioned. The excursion to Jerusalem adds little to what Maundrel and others have before told us; and, as we have already observed, we find no novelty in our author's professional details. The return from Egypt by sea, through the Grecian Archipelago, is not uninteresting, but scarcely offers any novelty. The description of the procession at the festival of the beyram and of the grand seignor are, however, among the few novelties of this volume.

'About eight o'clock the procession commenced; but the grand seignor did not make his appearance until half-past nine. The dresses of all those who composed the procession were splendid and costly. The fine horses on which they were mounted, and more especially those of the eunuchs and principal officers of state, were most gorgeously caparisoned, the housings of many of them being of gold embroidery, studded with precious stones, by which a very brilliant effect was produced. In the turban of the grand seignor was a beautiful aigrette of very great value, the diamonds of which it was composed being of uncommon magnitude. Several of his horses, on which his shield and various trophies were carried, were led in the procession; and being very richly caparisoned, and ornamented with a profusion of diamonds, rubies, and other precious stones, gave a brilliancy and magnificence to the scene, which far exceeded any idea I could previously have formed of it.

'During the procession, a Turkish officer was constantly employed in throwing on the heads of the populace handfuls of new paras. The contest which ensued, to pick them up, afforded to the Turkish spectators no little amusement.

'The grand seignor, who was very superbly mounted, was followed by his sword-bearer, carrying his sabre, the hilt of which was profusely studded with diamonds. Next came several officers of his seraglio richly dressed, bearing on cushions his turbans, ornamented with diamonds and other gems. The streets were lined on each side with Janissaries, whose dress-caps appeared to me both ridiculous and unbecoming. As the sultan passed along, he from time to time bowed with great affability to the people, all of whom prostrated themselves on his approach.

'The kislah aga, or chief of the eunuchs, officiated at the mosque, and wore on his return a valuable pelice and a rich caftan, with which the grand seignor had presented him. Several other caftans, of qualities suited to the rank of those for whom they were destined, were distributed by the sultan on this occasion.

'The procession was conducted with great decorum, and throughout the whole of it the best order observed. It would be impossible for me to attempt to describe all the striking appearances it exhibited, or to enter into a detail of the great variety and extreme singularity of the magnificent costumes which were displayed. To be brief—it afforded to us strangers a spectacle truly novel and interesting, and fully repaid us for the trouble we had taken to be comprehended among the number of the spectators. By eleven o'clock the streets were cleared.

'Selim III, the present sultan, is extremely popular with his subjects, and by no means destitute of the talents and abilities which a sovereign ought to possess. He is descended from the house of Osman, by whom the fifth dynasty of the caliphs was established in the thirteenth century. Having received a more liberal education than has usually been bestowed in Turkey on those to whose lot the succession has fallen, sultan Selim possesses a well cultivated mind, and has made himself acquainted with the policy of the more refined states of Europe. It is, therefore, not surprising, that he has introduced so many salutary innovations into his empire; and, from a conviction of their manifest superiority, has become so strenuous a partizan of the tactics and military discipline of England and France. In my subsequent details relative to the grand visier and the capitan pacha, I shall have occasion to notice, in a particular manner, the improvements he has introduced in his army and marine. He is of a courteous and affable character; and his physiognomy is fine and full of expression. His figure is well proportioned, and his aspect commanding.' p. 46.

The following remarks, of a different kind, merit attention.

'Among the prevailing diseases in Turkey, the rickets are very common in children, and blindness in adults.

'The lame and deformed objects who constantly intrude themselves on the view, are in such numbers as to excite astonishment.

'Pulmonary complaints, as far as I had occasion to observe, are by no means prevalent in this country; the catarrhal and asthmatic affections prevail most among elderly people.

'The Turks are certainly not subject to the multitude of diseases which infest some other nations. Sores and wounds are managed and healed with more facility; much may be ascribed to their temperance. Fontanelles, or issues, are in common use; and somewhat lessen the evils resulting from the indolent and inactive life which the Turks in general lead. Cutaneous affections, herpetic and tettery eruptions are common, particularly upon the head: dyspepsia, and other stomach complaints, prevail very generally. Their greasy food, inactive life, their excesses in the use of smoking tobacco, and opium, may give rise to these disorders. Hernias are common. Besides plague, they are occasionally subject to malignant and bilious remittent and intermittent fevers in autumn.

'In Constantinople, Pera, and the suburbs, there are, it is said, nearly five thousand persons who profess the different branches of the medical art. They are natives of almost every nation, but consist more particularly of Turks, Greeks, Armenians, and Italians, and are for the greater part utterly ignorant of the principles either of medicine or of surgery. There are, however, some exceptions to this observation, and among them a Mr. Ruiné, an Italian, whom I accidentally met with a few days before the period of which I am now treating. He occasionally attends the grand seignor, when indisposed, as well as the harem, and many of the principal officers of state. For these services he has no salary, but is paid for his visits. His practice is extremely lucrative. The person who at present holds the appointment of physician to the sultan, is a Turk, who, notwithstanding he is entirely unacquainted with medicine, receives an annual stipend of nearly five thousand pounds sterling. Almost every individual in Turkey has a nostrum for some disease or other.' P. 48.

The Turkish marine appears to improve; and we read, with some interest, the description of the admiral's ship, the Sultan Selim. Many ships of the line, built by Swedish and other foreign artificers, are said to be excellent. Sailors, however, cannot be *built*, with equal ease. The country in the neighbourhood of the Euxine, and of the Dardanelles, seems to have been observed very cursorily.

The British engineers were encamped for a long time at Jaffa, a situation sandy and dreary, but safe from an attack by sea, in consequence of its shelving coast, and the surf on its shore. Dr. Wittman confirms, from his inquiry, the reality of the tales of assassination and poison repeatedly asserted against Bonaparte. It adds to the enormity of the former transaction, that *four days* had elapsed after their surrender, before the unfortunate prisoners were butchered: it was cool deliberate cruelty. England may perhaps revenge, on her own grounds, these violations of every law human and

divine, should their author ever venture on the British shores; or, perhaps, the punishment of Bajazet may be still more appropriate; and, when Holland, Italy, and Switzerland, have expressed their detestation in every mode they may be able to devise, the murderer should be conveyed to Asia. Common punishments should be reserved for common crimes. We need scarcely mention the lesser enormities of the civilised barbarian—the wanton and cruel plunder of Jaffa, and the devastation of the cultivated scenery around it. The Syrian expedition is said to have proved the destruction of 12,000 Frenchmen. This seems, however, to be impossible, from the strength of the French army on the landing of the English, compared with their original number on their first descent at Aboukir.

The disorderly arrangement of a Turkish camp, the little attention to cleanliness, and the disregard of infection, are well known. What our author seems, in prudence, to have suppressed, is the turbulence of the Janissaries, and the want of subordination in the different allied corps which form the motley groupe of a Turkish army—perhaps the tardiness and procrastination of the commander in chief. It is, we have been told by other authors, no uncommon mode among the soldiers of expressing their disapprobation of any measure, or even of the inactivity to which they are compelled, to discharge a few balls through the visier's tent; for their cartridges are always furnished with a bullet.—The anatomy of a chamæleon we do not remember to have seen in any other writer.

'I had caught several camelions, one of which was found dead in its cage. Being desirous to know the cause of its death, I dissected it, and, on opening the intestine, found withinside a portion of a small twig, about an inch in length; and, a little further downwards, a delicate white round worm, nearly four inches in length, which was alive. I was much pleased with the singular conformation of this little animal, from the mouth of which I drew a white tender substance, between five and six inches in length, and of the thickness of a goose quill. Having an increased width at its extremity, it had somewhat the appearance of an inverted cone, and was filled with an extremely viscid and tenacious whitish fluid. This description of tongue, or weapon, as it may be more properly termed, nature has supplied to the animal to enable it to seize on its prey. I had repeatedly observed my camelions dart it forth suddenly, to the distance of five or six inches, and in this manner catch flies with an equal promptitude and certainty. The viscid and tenacious quality of the fluid sufficiently explains its use. By applying the point of a probe dipped in it, to the bodies of flies, I detained them for some time. The pulpy substance of which the dart, or tongue, is composed, is projected forwards by a triangular

cartilaginous ring, to which it is attached, and which is seated at the posterior part of the mouth. This cartilage is composed of rings, like the trachea in animals.

'The capacious lungs are composed of a number of small and delicate cells, tinged of a fine crimson colour. On cutting into the heart, the blood issued, but of a darker colour than that contained in the delicate pulmonary cells. The liver, which was of a darkish hue, was somewhat large in proportion to the size of the animal; and the gall bladder was filled with bile of a dark green colour. Only one common straight gut was perceptible. Several small round substances, nearly of the size of a vetch, and of a deep yellow colour, lay connected together in the lower part of the abdomen; as did also two lobes, similar to the lungs of an animal. These were likewise of a deep yellow, or orange-colour, and were nearly of the size of a small Windsor bean. It is evident, from this account of the conformation of the animal, that those who cherished the old error of its existing upon air, must have been very inaccurate observers.' P. 144.

The account of the climate of Syria we shall also select.

'A general idea of the climate of Syria may be formed from the following particulars:—During our stay there, the thermometer, in the months of July, August, and September, marked the highest, in the afternoons, from ninety-three to ninety-five degrees of Fahrenheit. It is unnecessary to remark, that during this interval the heat was extremely oppressive to such of our party as had not been inured to the more sultry climes. The sky was, at the above season, beautifully clear, without a cloud to obscure the wide expanse; and the atmosphere pure and benign. The greatest variation of temperature occurred in the months of October and November, when the rains came on suddenly with some degree of violence. This may properly be considered as the rainy season, since, generally speaking, during the other parts of the year a drought prevails. The very copious dews which fall in the dry months, when there is a total absence of rain, promote and forward the vegetation.

'During the summer months the prevailing winds are from the north and north-west. In entering on October, they are more variable, blowing strongly from the south, south-east, and east. It is at this time that the sudden and heavy showers commence, and that the sky, which was before so uniformly clear, is overspread with dark and heavy clouds. At length, the month of November drawing towards its close, the rains cease to fall, and the weather becomes pleasant and salubrious. The result of my observations at this season was, that before sun-rise the thermometer ranged from 42 to 52 and 53, and that, consequently, the mornings were refreshing and cool. At noon the variations of the thermometer were from 66 to 76, with a degree of heat which was by no means oppressive.

'On the coast of Syria the sea breeze prevails during the day time, and, falling in the evening, gives place to the gentle land breeze, which continues to blow until about nine the next morning.

'In the month of December, 1800, the January following, and a part of February, the weather was very tempestuous, with heavy rains, vivid lightnings, and thunders, the explosion of which was awful and tremendous. During this period the thermometer was low; and, on one occasion, the storm was accompanied by hail. The winds were usually from the south or south-west. A haziness from the southward was the sure precursor of each of the gales; and to this indication of foul weather was superadded a remarkably large circle, or disk, round the moon. This boisterous and comparatively cold weather was highly favourable to the health of the individuals belonging to the mission. It yielded, about the 10th of February, to a more warm and settled temperature of the air, which, bestowing on the arid hills some slight degree of verdure, rendered the aspect of the country more cheerful.

'Syria may in general be considered as a mountainous country; but the part bordering on Jaffa has several very extensive plains, which are intersected, at certain distances, with moderate heights. In approaching Jerusalem, after having proceeded to the other side of Ramla, the mountains are very lofty, and, having but a slender superficies of earth to cover their rocky prominences, are exclusively adapted to the cultivation of olive-trees, which take root in their very clefts, and hide the naked appearance they would otherwise exhibit.

'In general the country is but thinly covered with trees, and has few woods, or thickets. In the parts where there is no texture of soil, but merely a white loose sand, not a tree nor shrub is to be seen.

'To the north side of Jaffa, a small river, which empties itself into the sea, presents itself at the distance of two or three miles. It is the only one which I met with in Syria; it is probable, however, that others may have been formed, subsequently to the excursions I made into the interior, by the abundant falls of rain I have had occasion to notice.

'From the information I was able to collect, as well as from my own personal observation, I could not learn that either mines or eruptions of volcanic matter are to be met with in Syria.

'The soil in many parts, in those more especially bordering on the deserts, consists almost exclusively of a fine white sand, the reflexion from which is extremely painful to the sight. This barren territory extends, to the northward, beyond Jaffa. It contains, however, in common with the other parts of Syria, several fertile spots, covered with a rich black mould, which very copiously repay the labour bestowed on them. On the rocky grounds an inconsiderable portion of calcareous earth is found blended with marl.' P. 210.

The Syrians are, in general, of a moderate stature, but active and alert: their countenances are meagre; their complexions dark; their abstemiousness singular. Their principal disorder is ophthalmia; but they are subject also to cutaneous complaints, remittent fevers, and the plague. They are not disposed to pulmonary diseases, and are usually long-lived.

The Bedouins, and the other inhabitants of Egypt and the desert, have been sufficiently described.

The march through the desert offers nothing particularly interesting. Ascalon and Gaza, in this route, are distinguished as sacred ground, the scene of some singularly miraculous events recorded in the Old Testament.

What relates to Egypt we have repeatedly received, as already noticed, in a more satisfactory form, and in a more complete detail, from other authors. The following observations, however, we wish to preserve.

'On the 25th I had a particular conversation with an Abyssinian priest, recently arrived from his own country, who was about to leave Cairo for Jerusalem, from religious motives, and whose details relative to his native territory were extremely interesting. He assured me that the indigenous inhabitants still persevered in their custom of eating raw flesh, a luxury in which, however, the priests were not allowed to participate, but were, in conformity to their religious tenets, obliged to cook the meats necessary to their subsistence. He calculated that his return to Abyssinia would occupy a space of three months. In the course of our conversation it appeared that he was familiarly acquainted with many of the plants and animals, of which the celebrated Bruce has in his Travels given engravings and written descriptions. Mr. Bruce's book being at hand, the engravings, &c. were shown to him, and he gave to the animals and other productions the names which Bruce had annexed to them. I was thus enabled to satisfy myself of the accuracy of a part of what has been so strongly questioned in the accounts which the above traveller has published.' P. 332.

On his return homewards, we have observed that our author's voyage through the Grecian Archipelago furnishes some circumstances of interest. Rhodes and Scio are described at the greatest length; and the account of the school of Homer, as well as the description of the lepers, are interesting. The *lepra* of this country is evidently the *elephantiasis* of the more correct medical writers. The journey to England, through Asiatic Turkey and Germany, offers nothing of importance. Dr. Wittman should have known, that Dr. Gall's fanciful system had been published long before the printing of his own work; his account of it is both incomplete and inaccurate. Indeed we are sorry to observe, that the author's ideas on every part of philosophy, chemistry, and natural history, which he has had occasion to introduce, are vague or erroneous. We are promised many analyses; but not one appears; and we perceive some disgraceful errors, which, from their repetition, cannot be those of the printer.

The appendix relates to the weather and diseases of the country through which Dr. Wittman passed. The ophthalmia he never found infectious, except in one instance; and he

attributes it, as usual, to light and dust; but does not fail to remark the injurious consequences of *night* air in producing the disease, where both the preceding causes are excluded. What he says of the plague is peculiarly vague and unsatisfactory. Chenot and Mertens would have afforded him better information. It appears to be a fever from specific infection, highly asthenic, and only occasionally putrid. The kampsin is evidently a dry wind, chiefly consisting of hydrogenous gas; and the dust, said to pervade the nicest fastenings, is evidently deposited from the atmosphere, in consequence of its being deprived of water.—In Turkey, we perceive the thermometer in the shade at 95° in August, and at 16° in January. In Syria, in July, it often exceeded 90° degrees in the shade; but we do not notice it to have been below 46° in the ensuing winter. In Egypt, the heat and cold were more moderate.

The ornaments of this work are splendid and numerous. The march of the grand visier's army through the desert, the subject of the frontispice, is by no means deficient in spirit and execution: the sultan, as well as the chief officers of the state and of the army, are delineated in coloured engravings with considerable fidelity. The views, however, are neither drawn nor engraved with ability. The map is too confined in its extent; and the coasts and islands are by no means laid down with geographic accuracy.

ART. VIII.—*Life of Geoffrey Chaucer, the early English Poet: including Memoirs of his near Friend and Kinsman, John of Gaunt, Duke of Lancaster: with Sketches of the Manners, Opinions, Arts and Literature of England in the fourteenth Century. By William Godwin. 2 Vols. 4to. 3l. 13s. 6d. Boards.* Phillips. 1803.

THE literary raiment of Mr. Godwin is variegated. He wears a grotesque suit, checquered with patches, laboriously selected from political, moral, and philosophical romances, dramas, novels, and 'light memorials of the frail and fair.' Distinguished by this panoply, his characteristic *energy* enlivens the masquerade of modern learning, where he wanders 'from prose to song;' now 'serious,' as 'Antonine;' now 'raving,' as 'Rabelais.' Veiled in the sable of our dominos, we can silently mark the operation of *perfectibility* on our active and erudite speculator, admire his 'musing gait,' and smile at his fantastic attitudes. His splendid re-appearance, with an important addition to his robe, once more attracts us. Its texture and its hues we shall attentively examine.

To the undertaking of two quarto volumes, which (includ-

ing a preface, dissertation, appendixes, and nearly eighty chapters) comprehend eleven hundred pages, this biographer assures us that he 'came in a manner a NOVICE,' desirous, nevertheless, of convincing his countrymen that 'there existed mines of instruction and delight, with which *they* had hitherto little acquaintance.' To a novice we may hint, without arrogance, that, before *he* existed, students in poetry and history had worked these mines with effect; and that multitudes continually resort to them for *genuine* ore.

Mr. Godwin purposes to produce a work of a *new* species. He *liberally* describes preceding antiquaries, as persons, whom, nevertheless, it may be useful to consult, 'of *cold* tempers and *sterile* imaginations,' '*ignorant of the materials of which man is made*,' who usually '*stupefy the sense*,' *and* 'IMBUE *the soul with* MOPING *and* LIFELESS *dejection!*'

Mr. Godwin has not yet condescended to reveal '*the materials of which man* IS *made*;' but we suspect that the man must be made of *new* materials, whose sense or whose soul can be imbued with this rhetorical inanity.

Fancy and Philosophy are invited to unite their *energies* to accompany Mr. Godwin in his investigation of past ages; in his efforts to rescue 'the illustrious dead' 'from the jaws of the grave,' to 'question their spirits,' make *himself* 'their master of the ceremonies,' and 'introduce them to his countrymen.'

If we correctly apprehend, he is also ambitious 'to erect a monument to the name of Chaucer;' and, 'as far as he is capable, to produce an interesting and amusing book,' which may tempt others to study our older poets, and the elements of our language—'a study,' which *he* considers 'at least as improving as that of the language of Greece and Rome.' He next proposes to survey 'the manners, opinions, arts, and literature, of the same age;' 'to delineate the state of England, such as Chaucer saw it, in *every point of view* in which it *can be delineated*.'

Of his success, he expresses himself with exemplary self-abasement.

> 'I CAN pretend only to have written a *superficial* work. My studies, IF ANY THING OF MINE DESERVES SO SERIOUS A NAME, have chiefly been engaged upon other subjects.' Vol. i. P. ix.

The *overweening* humility of this passage ill-becomes a writer whose heroic *perfectibility* once boldly speculated on the ultimate annihilation of the moral, religious, and political establishments prevailing in the civilised world. A more appropriate modesty, however, generally pervades his volumes.

To accumulate materials for this *compilation*, Mr. Godwin

has consulted records in our national repositories neglected by *former* biographers. He acknowledges that his inquiries have received every attention from the keepers of these *records*, and from the officers of government. For his own omissions, he cautiously endeavours, in his preface, to anticipate censures, which, we fear, he cannot avert. The obvious defect of 'being less copious upon the last fifteen than upon the preceding years of the life of Chaucer,' is conveniently attributed to his bookseller, who professionally assured him that 'the public would not allow the TITLE of his book to authorise more than two volumes in quarto.' Mr. Phillips may be 'more conversant with matters *of this sort;*' yet *we* perceive nothing in the mere title which might not authorise a more voluminous publication. Chaucer, John of Gaunt, the manners, opinions, arts, and literature of England, during an entire and interesting century, are subjects not unprolific.

To palliate this neglect of Chaucer in his latter years, it is insinuated, that 'less is lost by this compression' than the writer 'was at first apt to imagine.' The reasons offered are feeble. 'An ample survey having been given of what occurred before Chaucer was fifty-seven years of age,' '*it is not likely* that his mind underwent any essential revolution *after* that period.' On a similar neglect of the concluding events in the life of John of Gaunt, the writer remarks: 'If I have not adequately rescued this prince,' in the antecedent narrative, from historical 'misrepresentation,' '*I am afraid it would be to little purpose* to have laboured on the concluding period of his life.'

'The analysis of Chaucer's last production, his Canterbury Tales, and the endeavour to trace these tales through preceding and contemporary authors,' Mr. Godwin has '*been constrained*' to omit. 'This part of Chaucer has been most studied.' The elaborate edition of Mr. Tyrwhitt, therefore, although expressly mentioned by Mr. Godwin, as the production of one of those '*cold*, *sterile*, *sense-stupefying*, '*moping*'-'*dejection*'-'*imbuing*' antiquaries, whom he has already described, has 'enough of judgement and knowledge' to form some excuse for this *constrained* compiler of two extensive volumes, who *declines* to recomment on the very work which he thus hyperbolically applauds: 'There is NO PRODUCTION OF MAN that displays more various and vigorous talent than "the *Canterbury Tales!*"

'The slightness' of the biography, compared 'with the magnitude of its object,' is confessed. The apologies for avowed omissions will be such only to *novices*. Abundant literary nutriment rapidly devoured, and *more* rapidly digested, impatience for publication, "or *any other* reason why" would have appealed as successfully to *our* indulgence.

The prefatory confessions of Mr. Godwin have extorted from us these unpleasant observations. *Critical* justice requires that we should state with equal sincerity his claims to commendation.

Disappointed in the aid which he had expected to derive from private collections, the biographer resolved 'to yield an assiduous, and almost daily, attendance at the British Museum.' All the books to which he has referred, 'throughout the publication, have been actually consulted.' He has examined the records preserved in the Tower, and in many other archives. 'For about one hundred pages' only, 'the books referred to are few, and many references are given at second-hand;' 'afterwards, this defect no longer occurs.'

Mr. Godwin has had 'the good fortune' to 'encounter' some 'discoveries:' the principal of these is discussed in a preliminary '*dissertation* on the *period of the birth of Chaucer.*'

URRY (authorised by a communication from John Anstis, esq. garter principal king at arms) had, in *his* edition, observed, that, 'in the tenth year of Richard II,' Chaucer gave evidence 'in a case of chivalry, depending between sir Robert Grosvenor and sir Richard le Scrope, concerning their arms,' which the king directed the heralds to decide. This observation awakened the curiosity of Mr. Godwin, who procured a copy of the deposition from the college of arms (which the appendix contains), and unexpectedly discovered grounds for a new hypothesis respecting the time of the poet's birth. The date usually assigned to this event is 1328. 'The deposition is dated 1386,' and mentions Chaucer to be '*del age de xl. ans et plus, armeez par xxvij. ans,*' aged forty years and upwards, and having borne arms twenty-seven years. If the *received* chronology of his life be correct, the age of Chaucer would have been, at this time, not *forty*, but *fifty-eight* years. Admitting the authority of the deposition, he must have been born 'about the year 1344.'

After a detailed statement of the *arguments* (founded on official records) which exhibit Chaucer as distinguished by a *gradation* of appellatives in successive grants, denominated *valettus* in 1367, *scutifer* in 1372, and *armiger* in 1374—although these reasonings appear to corroborate the *direct* evidence of the deposition—Mr. Godwin adheres to the *old* chronology, and most unceremoniously attacks even our *heralds.*

This *style* of fighting, if successful, is not remarkably *close.* We must endeavour to *compact* the conjectures and reasonings of many a page.

The deposition of Chaucer is not considered to *require* a more *precise* statement of *age*, than appeared sufficient to constitute *a credible witness* to a fact.

Chaucer deposed to a fact which had happened twenty-seven years before: he must, therefore, have been more than *forty* years old.

The deposition might be officially arranged *after* the examination. The officer might ask, generally, 'Are you forty years old *and upwards?*' (no very probable *form* of question) 'in other words,' Are you of an age to be a credible witness to the fact?' Chaucer, perhaps, as generally, answered, 'I am.'

'Forty years old' is a *round* number, and seems to authorise the presumption of inaccuracy.

Chaucer might be influenced by *vanity* to *understate* his age. He was a courtier, and might feel 'like an antiquated belle.'

Further evidence against the age, expressed in the deposition, is attempted to be substantiated by the assertions of Chaucer himself. Thus the cause of 'Chaucer *versus* Chaucer' proceeds:—

The poems of 'The Parliament of Birds,' and 'Chaucer's Dream,' were written, as is conjectured, in 1358 and 1359. If the *deposition* be authority, his age was then fourteen or fifteen; but these compositions are mature, and 'bear no marks' of juvenility.

If his birth occurred in 1344, the accepted statements of all his biographers, which relate to his studies at Cambridge, Oxford, and Paris, must be false.

Leland mentions 'the grey hairs' of Chaucer, and 'old age, as his greatest disease.' This cannot be true, in the general sense, if he were born in 1344, and died at the age of fifty-six.

Gower, a contemporary poet and personal friend, in the year 1392—3, alluding to Chaucer, mentions '*his daye's olde*,' '*his latter age*;' and proposes '*his setting an ende of all his worke*.' According to the *received* date, Chaucer, when these verses were written, was sixty-four or sixty-five years of age; but, if born in 1344, he could only be forty-eight or forty-nine; consequently the phrases quoted would be inapplicable.

In his 'House of Fame,' a poem which is supposed to have been written in 1380, Chaucer says of himself; 'for I am olde.' Judging by the *received* date, his age was fifty-two: by the *deposition*, he could be only thirty-six.

Mr. Godwin thus concludes:—

'It may seem indeed a very bold supposition, to maintain that Chaucer was fifty-eight years of age, at the time that he declared himself "forty years old and upward." But less than this appears scarcely sufficient to bear out the events of his life, and the language of Gower, as well as his own, taken from the House of Fame, upon

the subject. If we confess ourselves obliged to desert his own testimony and the idea that he was born so late as the year 1344, we are then placed at large in the wide field of conjecture; and I do not, in that case, feel myself inclined to "remove old land-marks," and set aside the date which has hitherto always been received, though we do not exactly know the authority upon which it is founded.' P. xxxii.

The novelty of the subject alone has induced us to abridge a hypothesis which we shall now abandon to our readers. In a subsequent article, we shall consider the work itself: determined, with chivalrous prowess,

——————— *'gittarci*
Nell' ampio fosso con prestezza immensa.'

ART. IX.—*The History of Ilium or Troy: including the adjacent Country, and the opposite Coast of the Chersonesus of Thrace. By the Author of "Travels in Asia Minor and Greece."* 4*to.* 10*s.* 6*d. Boards.* Robson. 1802.

'THE tale of Troy divine' will never cease to interest. If its venerable antiquity no longer recommend it, the picture which it offers of remote scenes, of manners so distant from those of the present times, of a state of society of which our ideas would otherwise be peculiarly imperfect, must render it a relique of singular importance and value. Our author has, in person, examined the scene, and collected, with assiduous care, what in every æra would interest, but what of late has become peculiarly attractive, in consequence of the bold denial of Mr. Bryant, that the siege of Troy was not a real transaction, and his assertion that its source was only a petty warfare in Upper Egypt.

A subject of late so often canvassed we cannot again engage in; but this abstract of our author's more extensive labours, which he seems to promise, and which we trust he will eventually give to the public, must not be wholly passed over. The present is a history of the Troäd, of the facts which occurred in that scene, of the varied fate to which it has been subject. As it may be again the theme of our remarks, we may now survey, with a little anxious curiosity, its earlier destinies, especially as we suspect that the peculiar circumstances of this district have not entered, so much as they ought to have done, into the views of the authors who have contended on either side.

The commerce of the ancients has not been explored with a scientific eye; but it was commerce that first gave consequence and importance to the Troäd. The sagacity of Clarke, in a work which scarcely promises information upon this subject—the Connexion of the Roman and Saxon Coins—has in a few pages more fully illustrated the subject, than the plan-

sible but superficial bishop of Avranches in his whole work. The Euxine was the scene of the ancient trade. It was hence the productions of the north were received by means of the numerous rivers, and of the east through the passes of Mount Caucasus. The latter were seised by Sesostris, and the *dépôt* was assailed by the Argonauts—for this was in reality the golden fleece. The harbours of the Troäd, at the entrance of the Bosporus, rendered it a convenient spot for mutual communication. It was always easy to enter the straits by a south-west wind, the prevailing one in the Ægæan; and the currents afforded an equally easy communication to return. Hence the riches of Troy, rather than the insult offered to Hercules, occasioned its first destruction—for the Argonautic expedition, as we shall on another occasion show, was merely a predatory one.

The first Troy was seemingly built near the sea, probably in consequence of the convenience afforded by the harbours. Taught by their disasters, the Trojans next founded their city in the vicinity of Mount Ida. Their rear was defended by this mountain; their right by the grove of fig-trees: they were hence no longer exposed to a predatory incursion, but required a regular siege. The cause of the concerted expedition of the Greeks is said to have been the rape of Helen; but it cannot be concealed that the independent states were not likely to be excited in a cause so little interesting to the whole. The adventure of Paris was in the piratical style of a freebooter—a character neither uncommon, nor, as we find in different parts of Homer, disgraceful; and we observe, among the presents selected by Hecuba to ransom the body of Hector, a robe brought from Sparta, with Helen. In fact, this piratical expedition seems to have been avenged by another, not merely confined to Troy—for Lemnos and Samothrace were confessedly laid under contribution; and, from accident or design, the coasts of Mysia were for a time ravaged, instead of the Troäd. If any additional argument for the importance of this coast, as a rich commercial *dépôt*, were wanted, we might cite the obscure narrative of former descents. It is sufficient, however, to notice the subsequent rebuilding of a third Troy nearer the coast; of the encouragement and liberality of Alexander, all whose establishments were fixed with commercial views; and, above all, the magnificent designs of Constantine, till he found the harbours would no longer admit large ships.

Advancing this preface, we may very advantageously follow our author's history, which, though short, is interesting, lively, and satisfactory.

"Avoiding the question concerning the limits of the Tröia or Troas, about which authors have varied, I shall follow the very antient geographer Scylax of Caryanda, who makes it, as Strabo

has observed, commence at Abydos; and, in Asia, shall confine my researches to the district, of which the coast, beginning at the junction of the Propontis with the Hellespont, reaches to Cape Lectos; including the region of Mount Ida connected with it, serving as it were for a back-ground to the landscape as beheld from the sea; and also some places situate on the opposite side: in Europe, to the corresponding coast of the Chersonesus of Thrace, ending in the promontory where the Hellespont falls into the Ægæan. I shall not enter at present on the local detail, but, referring the reader to the annexed map of the country, proceed with its history.' P. 2.

From what quarter the Troäd was peopled, is of little consequence, though it engages a part of Dr. Chandler's attention. Tradition has conveyed Dardanus, its king, from Samos or Samothrace on the west: history supports a continued population from the east. It was probably, as tradition asserts, once a marsh, and gradually rendered populous, as the ground grew harder, and more capable of being inhabited. The early names of the chieftains were evidently fictitious. Helle must be drowned, to give a name to the Hellespont; and Tros must reign, for the sake of an etymology. The Greeks have always had recourse to such expedients, to appropriate to themselves countries in which they were only colonists; and, in many instances, Celtic and descriptive names have become Grecian by the happy substitution of a fictitious ancestor. In general, when such shifts occur in the Grecian history, or when the genealogy terminates in a deity, we may conclude, either that little is known, or that Phrygian or Celtic appellations are accidentally misunderstood, or designedly misinterpreted.

'The dominions of Priam, who from little became great and a king of kings, comprised the whole of the country lying within the island of Lesbos, Phrygia, and the Hellespont; and were divided into eight or nine dynasties. Of the portion within our limits, the mountain-side, and the tract beneath Ida, toward the sea, constituted Dardania; in which was the city Dardanus or Dardania, possessed by the Dardani or Dardanii. Troy or Ilium belonged to the Troes or Trojans. The other places noticed in the Ilias are, in Asia, Abydos, Thymbra, Scepsis, and Tenedos; which island had been recently peopled by Tennes, from whom it was named; the son, according to some, of Cygnus, a Thracian by descent, and king of Colonæ, on the opposite continent of Asia. The Thracians of the Chersonesus are distinguished by the poet as dwellers on the Hellespont, and Sestos is joined with Abydos and Arisbe, which last, from an epithet bestowed on it, is supposed to have been the principal city in that jurisdiction.

'The Tröia seems, in the time of Priam, to have been inhabited chiefly by villagers, who cultivated the soil; or by peasants, who were dispersed over the country, attending cattle in the plains and on Mount Ida. In Asia, as well as Greece, the sons of the most

exalted personages were then commonly employed in keeping flocks and herds; which constituted a large portion of the opulence, if not the entire revenue, of their fathers. This had been the occupation of Anchises and Æneas. The mares of Priam fed in the pastures of Abydos, under the care of his son Democoon; and his oxen, to omit other instances, under that of Alexander, or Paris, on Mount Ida.

'If, according to old tradition, iron-ore was first discovered and manufactured by dwellers on Mount Ida, the Phœnicians, it is likely, frequented the Tröia, even before Priam, to traffic for the metal while it was rare. They are mentioned by Homer as resorting to the ports of Lemnos, with the pretious merchandise of Sidon. A large silver bowl belonging to Achilles, which the poet describes as of incomparable beauty, had been a present from some of them to the king of that island; and queen Hecuba possessed store of robes embroidered by Sidonian women, and procured for her by Alexander or Paris, her son; whose return from his voyage was made memorable by another article of importation which had better been omitted. This was Helen, wife of Menelaus, king of Sparta; to recover whom and the treasures with which she had eloped, was the object of the famous confederacy of Grecian princes under Agamemnon, brother of the injured husband.' P. 10.

This passage is singular in many views, particularly in what respects iron; for, though this metal occur in rocks of the earliest formation, it was not used in the warlike weapons of the ancients. The hardest metal they knew was copper with an admixture of tin. We confess that we have sought in vain for the passage quoted in Diodorus Siculus, and suspect some mistake. It is, however, certain, that iron was known before its manufacture was understood.

Our author next gives an abstract of the siege, and seems to think that it was not seriously undertaken till the tenth year. Various skirmishes and accidental rencontres had occurred, but no decisive attack had been made. He then follows the events subsequent to the death of Achilles, either as noticed in the Odyssey, or from the best accounts of subsequent historians. The evidence in favour of the credibility of the story is added, from which we shall select a page or two, as a specimen of our author's concise refutation, and the lively archness with which he sometimes unexpectedly animates an otherwise dry disquisition.

'This island of Achilles, which is mentioned by Euripides and by many other antient authors, was formed by mud from rivers; and perhaps has since been connected with the continent of Europe. But, whatever it may now be, for the spot has not been explored, it was originally small, and is described as desert and woody, as abounding in living creatures, and much frequented by aquatic birds, which were regarded as the ministers of the hero, fanning his grove with their wings, and refreshing the ground with drops, as it were of rain, from their bodies. He was said to be visited

there by Protesilaus, and several of his friends, who had been likewise released from the regions of Pluto, to appear sometimes; and oftener to be heard, playing on his lyre and accompanying it with a voice divinely clear. A long and narrow peninsula in the same sea was called *The Course of Achilles;* being the place where he was reputed to take his exercise of running.

'It does not often happen that antient fiction can, as in this instance, be traced to its source; and scepticism or incredulity is frequently the result of difficulty in discriminating true history from its alloy. Mr. Bryant has contended, that the two poems of Homer are mere fables, and that no such war, no such place as Troy, has ever existed. Having made a large collection of idle and absurd stories from different authors about Jupiter and Leda, and Helen (whom he will not allow to have been carried away from Sparta by Paris), and several other persons concerned, he declares, and nobody, I imagine, will dissent from a position of so great latitude, that "the account of the Trojan war, as delivered by Homer and other Grecian writers, is attended with so many instances of inconsistency and so many contradictions, that it is an insult to reason to afford it any credit."

'In the description, says the same learned person, of the siege of Troy and the great events with which it was accompanied, Homer "is very particular and precise. The situation of the city is pointed out as well as the camp of the Grecians," and various objects, "with the course and fords of the river, are distinctly marked, so that the very landscape presents itself to the eye of the reader.—The poet also" mentions "several" subsequent "events—in medias res non secus ac notas auditorem rapit—" all which "casual references seem to have been portions of a traditional history well known in the time of Homer, but, as they are introduced almost undesignedly, they are generally attended with a great semblance of truth. For such incidental and partial intimations are seldom to be found in romance and fable." Who, on reading these remarks, would suspect it to be the scope of the author, to prove the whole story of Troy as ideal as a fairy-tale?

'I will not enter here on a particular examination of the arguments used by Mr. Bryant on this occasion. Some of them I shall be obliged, though unwilling, to notice as we proceed. It may, however, be now mentioned, that among other novel opinions, for which I refer to his Dissertation, he maintains, that the groundwork of the Ilias, if it had any, was foreign to the country on which we are employed; that the history never related, but has been borrowed and transferred, to it; that, in short, the original poem of Troy, the parent of the Ilias, was an Egyptian composition. I shall add a companion or two to this notable discovery. A disciple of Epicurus undertook to prove the Ilias to be entirely an allegory; and I have somewhere read, that it was not first written in Greek, but is a translation from the Celtic language.' p. 25.

Dr. Chandler follows Homer, so far as regards the fates of Æneas and Antenor. He thinks, with great reason, that Æneas afterwards reigned in the Troäd, and that, in his per-

son, the race of Dardanus was continued. Of course, the foundation of the Æneïd is destroyed; and our author shows that the name of Iülus was never heard of, till it was necessary to deduce the Julian race from Æneas. Æneas was, however, soon overpowered by a successive irruption of Æolians, Ionians, and Lydians; and the family was no longer remembered. Sigeum was afterwards taken by the Athenians. —The chapter on the age of Homer we shall select intire.

'It is remarkable that Homer, though he has taken notice of two capes or promontories forming a bay before Troy, and had frequent opportunities, has yet never mentioned either of them by name. The reason might be, if they had then appellations in the language of gods or men, that these were not reconcilable, as in some other instances, to the measure of Greek heroic verse. They seem to have been called, not perhaps till long after him, the one Rhœtéum, because the current of the Hellespont made a ripling noise about the cape in entering the bay; the other, Sigéum, from its passing out in silence.

'Homer, according to some, was of the country, and lived at or about the time of the siege of Troy. We have his own authority for saying, that he was not present when the two armies, after the secession of Achilles, were arrayed for battle; but he might be contemporary with the transaction though not on the spot. He mentions the public cisterns near the city, where the Trojan females had been accustomed to wash their linen before the arrival of the Greeks, as still remaining. A tale is related of him, not the only one of the sort which we shall have occasion to notice, that, keeping some sheep by the barrow of Achilles, he prevailed on him by supplication and offerings, to appear; when the insufferable glory which surrounded the hero deprived him of his eye-sight. If I have reasoned rightly in a preceding chapter concerning Æneas, he flourished during the monarchy which succeeded to that of Priam, and which, if it did not expire before, was subverted or greatly curtailed after the arrival of the Æolians at Lesbos and Cuma.

'The predictions, if they may be so termed, of the future kingdom of the Æneadæ, of the demolition of the Greek entrenchment, and of the death of Achilles, in the Ilias, must be regarded as of a date posterior to their accomplishment. It was easy for Homer to have, in like manner, recorded by anticipation the coming of the Æolian colonists, if it had happened before his time; and as he is silent respecting it, and any later occurrences or transactions, while he holds forth an increasing kingdom in the Tröia, recumbent on the house of Æneas, it may be inferred, that those spreading, though not hostile, aliens had either not left their homes, or not reached this country.

'We have here a strong argument from the Asian continent in favour of the opinion that Homer was prior as well to the return of the Heracleids into the Peloponnesus, to which he has not even alluded, as to the Æolic migration, which was a consequence of it; since a son of Æneas ruling in the Tröia will co-incide as contem-

porary with Orestes son of Agamemnon; with whom yet reigning at Argos the Grecian history of Homer in the Odyssey ends.

'The poems of Homer are said to have been first introduced into Greece from Ionia by the Spartan lawgiver Lycurgus; but it was Pisistratus, or rather his son Hipparchus, who was believed to have arranged the separate cantos; and, by digesting and uniting them, to have compiled the Ilias and the Odyssey. The residence of the latter at Sigéum was likely to produce a knowledge of these compositions; or, if he had previous acquaintance, an intimacy with them; but who will say how long they had been extant and popular in Asia Minor before Lycurgus and Pisistratus?

'In the Tröia, some of the places which had been desolated by the Greeks, afterwards revived; or were removed, either through the superstition of the people or for greater convenience, to other situations, mostly near the sea. Besides those already mentioned, some will occur within our limits, of more recent foundation; and some, which might be extant in the time of Homer, though unnoticed by him; and which, from circumstances attending or connected with their remote origin, afforded antiquaries matter of disquisition. The changes undergone by the country, and the new distribution of territory, which succeeded the war, could not be suddenly completed; and in certain cases, as in the instance of the Trojans of Polïum, their commencement did not admit of being long delayed. But it does not appear that Homer had any knowledge of Polïum, of the cities which were erected on the Rhœtéan and Sigéan promontories, of the settlements by Æantéon or Achilléon, or of Elêus; and his silence respecting these and other very antient places may be considered as an additional argument against the late age assigned to him by some writers.' P. 39.

These arguments are very satisfactory; yet the voice of tradition opposes them; and the internal evidence of the language is also in opposition to the facts stated. The Æolic migration occurred about fifty, or at least within eighty, years after the taking of Troy. This, according to the Marbles, would bring the æra of Homer to 1129 years before Christ; but, according to other chronologists, only about 1100 years. If Herodotus flourished about 450 years before Christ—for that is nearly the middle period of his life—it will bring the age of Homer to 850 years before the Christian æra, since he says that Homer lived about 400 years before him. If this computation be allowed, it will vary the sacking of Troy to a much lower date than chronologists have yet attempted.—We must explain.

The æra of the capture of Troy is taken, we believe generally, from the Marbles—a record that we do not think absolutely to be depended on. In this case, its æra is open to great suspicion. The united voice of antiquity makes Hesiod a contemporary with Homer, perhaps a little older; but the æra of Hesiod is not uncertain; for he mentions the helical rising of Arcturus, the occultation of the Pleiades, and

the culminating of Sirius and Orion, when the rising of Arcturus coincides with break of day (Αρκτουρον εξιδη ροδοδακτυλος Ηως). These circumstances have been considered by sir Isaac Newton and Mr. Robinson; and the difference is about seventy-two years. Mr. Robinson, who certainly strains his calculation to approach the æra of the Marbles, fixes the period of Hesiod at 942 years before Christ; sir Isaac, at 870. For reasons too long to be adduced in this place, we adhere to the latter; though some corrections must be allowed, which will approximate the age of Hesiod to 900 years; and, from our author's very satisfactory reasons, the sacking of Troy must be brought down to about 950 years before Christ. Hesiod himself speaks of his living in the age which succeeded that of the Trojan warriors (E. και Η. v. 156 to 185); and of course Homer may have conversed with those who had seen Achilles, Agamemnon, and Ulysses: he might have been ignorant of the Æolic invasion, and supposed the race of Æneas to have reigned long and happily. It will also follow, as the æra now assigned is nearly that of the travels of Pisistratus, that these ballads had not been long in danger from the corruption inseparable from oral tradition.

Yet the internal evidence of the language is at variance with this well-compacted series of arguments. The state of society described is rude and primitive; the language employed such as Greece could not excel in the *acmè* of her civilisation. At the period of the war, the wants of the parties engaged were few, and luxuries unknown; yet, in polish, variety, and force, of the language, we are carried to an æra of high civilisation. In the 400 years interposed between Homer and Herodotus, the Greek language seems to have admitted of little improvement. Hesiod is very different. A rugged energy pervades his works; an uncourtly simplicity gives little relief to his solid good sense. Even to the Muses his address is coarse and uncivil. He expressly says that they could tell lies with a good grace, and speak truth only when they chose to do so.

> Ιδμεν ψευδεα πολλα λεγειν, ετυμοισιν ομοια·
> Ιδμεν δ', ευτ' εθελωμεν αληθεα μυθησασθαι.

The mythology, also, of Homer and Hesiod greatly differs; but such discussions would lead to a volume. However the elegance of Homer's language may be accounted for, we may probably conclude, that the taking of Troy, the poems of Homer, and their collection by Pisistratus, were not events very distant. If sixty years be allowed to elapse between the two former, thirty or forty will probably be the utmost extent of the period between the latter æras.

The history of Ilium, after this æra, is less interesting. The Ilieans, as they are styled by our author, were always

sufficiently cunning to profit by the scenes formerly acted on their stage; and, when the fancy struck the Romans to claim Æneas for their ancestor, lest, like prince Prettyman in the Rehearsal, they might be suspected of having no ancestor at all—the inhabitants of the Troäd obtained numerous advantages in consequence of that supposed origin. They had also various reports, and many contrivances, to keep credulity and superstition alive. 'Portents and prodigies grew so frequent, that they soon lost the name;' but Apollonius of Tyana availed himself, with great sagacity, of the credulity of his compatriots, and forged a tale, which has its counterpart only in Don Quixote's visit to the cave of Montesinos. One of Lucian's jests our author has omitted. When it is proposed to question Homer, in the Elysian fields, respecting some event, Pythagoras observes, 'How should he know? he was a camel in Bactria at that time;' and, if we mistake not—for we now quote from memory after a very long interval—he makes the period between the age of Homer and the destruction of Troy to be 300 years.

Dr. Chandler follows the history of Ilium under the reign of Darius, during the expedition of Xerxes, the two Peloponnesian wars; the reigns of Alexander, his successors, and king Attalus, to the establishment of the Roman empire in Asia. After the time of Julian, the history is pursued to the final settlement of the Troäd under the dominion of the Turks.—These chapters offer nothing that needs detain us; for we have, in part, anticipated the detail.

We must now leave our author, to whom we would express our gratitude for thus bringing us back to the days of other years, to the recollection of images long since stored, and on which we little expected to be again called to meditate. We trust that his claim on our recollection will be renewed by a future publication; and we may then be able to recall more perfectly our former ideas by a perusal of Heyne's Homer, which we have not yet been able to obtain. In the mean time, a work on the early maritime discoveries, unexpectedly and undesignedly delayed, will usher us into the same arena on a subject somewhat allied to the present—the Argonautic expedition.

ART. X.—*Memoirs of the Life and Writings of the Reverend Alexander Geddes, LL. D. By John Mason Good.* 8*vo.* 10*s.* 6*d. Boards.* Kearsley. 1803.

'TO write,' says Mr. Good, 'the life of a friend, is a difficult and a delicate undertaking;' and he assigns this reason for his assertion, that 'the public are entitled to a correct impar-

tiality of statement, while the heart of the writer, from a sacred regard to the duties which friendship itself inculcates, is perpetually prone to magnify the merits, and to soften the imperfections, of the character he attempts to delineate.' In this position we agree; and it was upon this ground, that, in reviewing our biographer's *Translation of Solomon's Song*, we thought it a duty to speak of Dr. Geddes less partially than Mr. Good appeared to have spoken. But though the Memoirs before us are written in the same friendly spirit, they will be found, if read with proper allowance, to be as well instructive as amusing.

The plan which Mr. Good has adopted is both simple and judicious. The personal and literary history of Dr. Geddes are ingeniously blended; and an account is given of his several publications, with the circumstances that occasioned them, and the effects they produced. Much entertaining information is interwoven, by the author, with acute criticism and judicious remarks.

Proceeding from the birth of Dr. Geddes, which happened in 1737, at Arradowl, in the parish of Ruthven, and county of Banff, in Scotland, his biographer takes occasion to observe, 'from what apparently trifling incidents we sometimes derive the whole bent of the dispositions and studies of our future lives;' and exemplifies his observation from the instance of the doctor, whose parents were Roman-catholics, and possessed an English Bible, as the principal of the few books that composed their meagre library. 'His parents, though catholics, were not bigots; they taught him, therefore, to read the Bible with reverence and attention;' and his taste being thus fixed in his childhood, continued to predominate through life. After prosecuting his studies at Scalan, in the Highlands, under a student of Aberdeen, whose name was Shearer, and whom the laird of Arradowl had engaged to educate his sons, young Geddes removed, at the age of twenty-one, to the Scotch college at Paris, under principal Gordon; and, while there, availed himself of the lectures on rhetoric, which were delivered with so much celebrity by M. *Vicaire**, professor in the college of Navarre, and those of Buré and De Saurent, who lectured on theology in the same college. Nor did these subjects entirely engross his attention. M. l'Avocat, professor of the Orléans chair in the Sorbonne (an appointment instituted in 1751, by the son of the duke-regent, for the revival of the eastern languages, and explaining the Hebrew Scriptures), attached him to the study

* Of this accomplished scholar there is a profound critique on the Æneis of Virgil, which, though but a small duodecimo volume, includes the result of thirty years study employed on the subject. We mention it here, as highly deserving attention.

of Hebrew; and this he pursued with the rest. Of this excellent man, Dr. Geddes has presented the following character:—

"He had a penetrating genius, an astonishing memory, a correct judgment, and an exquisite taste. He was the most universal scholar, the most pleasant teacher, the most benevolent man, and the most moderate theologian, I ever knew. Had he lived a little longer, and enjoyed more leisure to accomplish the work he meditated on the Scripture, we should now possess a treasure of great value; but a weakly constitution and too constant an application to his professional duties hurried him away in his 56th year, to the great regret of all who knew him; but of none more than of him who dedicates these lines to his memory." P. 20.

Besides these pursuits, Mr. Good observes, that Dr. Geddes

'entered deeply into an analysis of the Greek and Latin languages, pursued with insatiable avidity those exquisite mines of precision and judgment, of taste and fancy, which are no where else to be met with in an equal degree, and laid the foundation for that elegance and facility, that fecundity and correctness of style, with which he afterwards engaged in Latin and Greek compositions, and which have not often been exceeded by any of his countrymen since the age of George Buchanan. To these important acquisitions he also added a study of several of the modern languages of Europe. The French was indeed become almost vernacular to him, and required no further study whatever: his first serious engagement was therefore in the Italian; and having shortly mastered the few difficulties which were here presented to him, he carried his pursuits successively to the Spanish, the German, and the Low Dutch. To the mathematics he never discovered much attachment: at which I have often been considerably surprised; for no man was ever a shrewder logician, or followed with keener penetration, in a controversy, the bearings of an adversary's argument through all the lights and shades, not merely of every syllogistic proposition, but of almost every phrase and every individual word. The mathematics, however, which have seldom been in any high degree of favour with our neighbours of France as a branch of general education, did not, I believe, constitute any prominent part of the course of instruction delivered at the Scotch Parisian university, and hence perhaps his distaste for a science for which he was so well qualified by nature. To many of the branches of natural and experimental philosophy he paid, nevertheless, a considerable portion of attention; devoting to them almost the whole of his intervals at home, and pursuing them rather as a relaxation from the severer duties of stated instruction, than as comprehending a necessary part of such instruction itself.' P. 22.

The panegyric which the biographer pronounces on his friend's classical attainments, we must confess ourselves unable to assent to; for, if any thing written by Dr. Geddes be intitled to such praise, we will henceforth renounce all pre-

tensions to judge. His Greek compositions, indeed, we never have seen; but those written by him in Latin, when compared with the classical remains of Roman taste, are as little like them as monkeys are to men; and, however well Mr. Good may have described the properties of *a shrewd logician*, as possessed by Dr. Geddes, in our estimation that species of logomachy which tends rather to perplex an adversary, than to discover truth, is a qualification of but little worth. In respect to the science of mathematics, we wonder not at the doctor's dislike; for it ill assorts with that logic in which he excelled. But Euclid, had Dr. Geddes condescended to have read him, would have been found less a fool than, it seems, he supposed.

To the doctor's competency in the French and Italian languages we have nothing to object, from not having had an opportunity of judging; but that his knowledge of the German, Arabic, and Hebrew, was limited, we affirm without scruple.

From Paris, Dr. Geddes returned to Scotland, after an absence of six years; and, being ordered to exercise the function of a priest at Dundee, quitted Edinburgh for that purpose. There, however, he remained not long: an offer having been made him by the earl of Traquaire, to become one of his family, he became, and continued, an inmate of it for somewhat more than a twelvemonth, when love slipped in, and occasioned his removal. The doctor feeling the pressure of a vow, perhaps too rashly taken, quitted at once the house of his friend, and the object of his passion, to whom alone he communicated the cause. Paris was the scene to which he repaired; but, dissatisfied here, he returned to North-Britain. At Auchinhalrig he took charge of a catholic congregation, built a new chapel and parsonage, rendered himself useful in his flock, and cultivated the acquaintance, in particular, of protestants. Having, at this period, incurred pecuniary embarrassments, from which the late duke of Norfolk liberally relieved him, Dr. Geddes entered on a farm. In a short time, however, through the erection of a new chapel at Fouchabers, he found his difficulties return. It was probably to console himself, by his literary exertions, that he now (1779) published his first work—'Select Satires of Horace, translated into English verse, and for the most Part adapted to the present Times and Manners:'—the profits of which, with the assistances of his friends, served once more to wipe off his debts. Being, at this time, engaged to instruct lady Findlater in English, Dr. Geddes contracted an intimacy with a Scottish clergyman, of the name of Buchanan, who had been preceptor to the earl; and, having been induced to attend his ministry in the church, the rage of bi-

shop Hay was so stimulated, that, from expostulation, he proceeded to rebukes, and thence to menaces, which ended in suspension.

The doctor left the diocese, and Scotland, to the regret, not only of his two congregations, but also of his literary friends at Aberdeen, who, in the beginning of the following year (1780), conferred on him the degree of Doctor of Laws.

At this time was instituted the Society of Antiquaries in Scotland; in founding which, Dr. Geddes had been very active. On this account he was elected a corresponding member; an honour which he acknowledged in a Scottish epistle. At his arrival in London, the recommendations he was furnished with procured him access to many literary characters. The duchess of Gordon received him in her house, and favoured him with an introduction to the late lord Petre, who there met him by express invitation.

The want of a good vernacular version of the Bible was an evil that his lordship had long lamented; and, Dr. Geddes concurring in opinion, a plan was formed to effect such a work, and seconded by his lordship with a 'princely munificence.'

About this period, the Imperial chapel being suppressed by the emperor Joseph, Dr. Geddes went from it to that of Duke-street; and, thence, to reside again in Scotland, with the earl of Traquaire, his former patron, in compliment to whom he published his Tweedale pastoral. The bill of sir George Saville, for relieving papists, having occasioned riots in Scotland; and these being followed by the conflagration in London, Dr. Geddes composed his *Modest Apology for the Roman-Catholics of Great Britain;* which, however, by the advice of his friends, he was induced for a while to suppress. A fanatical pamphlet, published by Mr. Williams, drew from him, at this time, a brief reply.

After a tour to the south of France with lord Traquaire and his lady, the doctor returned to London; and, having become acquainted with Dr. Kennicot, was introduced to bishop Lowth, who advised him to draw up a *Prospectus* of his version of the Bible, which he did, and published it with a dedication to lord Petre.

This was followed by a letter to the bishop of London, intended as a sequel to the foregoing work.

The new connexions thus formed with the dignitaries in the church, doctor Geddes no doubt thought he might more strongly cement by joining in an attack so powerfully patronised as that on Dr. Priestley. Accordingly a pamphlet from the doctor immediately appeared under the title, of 'A Letter, in which the Author attempts to prove, by one prescriptive Argument, that the Divinity of Jesus

Christ was a primitive Tenet of Christianity.' But with what sincerity this opinion was avowed by our author, his Latin creed addressed to Dr. Disney will show.

The application of the dissenters for a repeal of the Test, having revived that topic of dispute, Dr. Geddes heartily joined in it, though he admitted that the ground which they chose to act upon, was neither well chosen, nor judiciously defended.

The doctor now took part in the Analytical Review, in which, for five years and half, he continued to write.—It will be proper here to remark, that the articles he supplied (of which Mr. Good has inserted a list), are amongst the best productions of Dr. Geddes's pen.

This engagement, however, causing no relaxation in the doctor's Biblical pursuits, he published, in 1788, his 'Proposals for printing a new Translation of the Bible, from corrected Texts of the Original, with various Readings, explanatory Notes, and critical Observations.' The specimen appended to this tract excited much discussion both among Jews and Christians; and, the doctor having solicited hints and suggestions for the improvement of his work, it became necessary, previous to the appearance of the first volume, that he should notice the communications received. This induced him to bring forward, in the year 1790, 'Dr. Geddes's General Answer to the Queries, Counsels, and Criticisms that have been communicated to him since the Publication of his Proposals for printing a new Translation of the Bible.' This pamphlet involved him in a contest with bigots of different persuasions, but particularly in his own church, against whom he defended himself with a commendable spirit.

The breach, however, with some of the latter, was made wider in consequence of the application of the English catholics to the legislature for additional relief in matter of *præmunire*. On the protest and oath, the great body of the catholics were indeed divided: a pastoral letter was published by the bishop of Comana, to which Dr. Geddes replied. Two encyclical letters likewise appeared, written by the vicars apostolic; of which the latter was republished by Dr. Geddes, with a sarcastic commentary. In the mean time the bill proceeds, and, passing into a law, the dispute it had occasioned terminates. The advantages which were gained to the catholic community by this act, Mr. Good has well stated.

In the same year, our doctor showed himself in a new light, by the publication of his *Epistola Macaronica*, addressed to his brother, and his *Carmen Seculare pro Gallica Gente*. Of the former (occasioned by a general dinner of the protestant dissenters at the London Tavern, at which place they had assembled to wish success to their efforts for obtaining a repeal

of the Test and Corporation acts), possessing considerable merit, we will present an extract.

'Quid referam Cleri clarissima nomina? Reesum,
Lindsæum, Kippis, conspicillisque Toërum
Insignem—et (woe's me!) violentâ sorte coactum
Belshamum; niveo candentem pectore Disney;
Et Price, humani generis totius amicum.
Non aderas, Priestley!—potior te cura tenebat
Rure, ubi magna inter centum miracula rerum,
Horslæi caput in rutilantia fulmina forgis;
Sulphuris et satagis subtilia grana parare,
Church quibus et churchmen in cœlum upblowere possis.'
P. 258.

In this poem the doctor takes occasion to introduce his extravagant praise of Mr. Fox, whom he styles, in plain English, 'one of the *greatest*, and *wisest*, and *best* of men.' Concerning the *Carmen Seculare*, little good can be said.

The topic that next engaged Dr. Geddes's attention, was the slave-trade; concerning which Mr. Good very unadvisedly observes, 'the attack began, for some reason, *of which I am ignorant*, upon the tender conscience of Mr. Wilberforce.' The doctor's tract on this subject is ironical, and entitled an 'Apology for Slavery.' What, in the conclusion, Dr. Geddes foretold, we see has literally happened.

"Ye Foxes and Windhams, ye Smiths and Wilberforces! give up, give up your vain pursuit. What though the minister lend you his single voice? what though he lend it you seriously? The voice of the minister will, on this occasion, be drowned by the voice of ministerialists; and your opposition here will be as ineffectual with him on your side as it is every where else when he is against you." P. 276.

The work which at this time occupied the chief attention of the doctor, was Cowper's translation of Homer. Of Mr. Cowper, as an original poet, Dr. Geddes thought most highly; considering him, however, as having failed in the task of *translating*, and conceiving himself qualified to *Anglicise* Homer, he confidently engaged in the enterprise; but, notwithstanding the doctor's insulting sarcasm on Fuseli (who possesses a hundred-fold more knowledge of Homer, than himself could ever attain to), had he deigned to have consulted him, we never had been told of *an-all-round-about-close-covered quiver* in Homer, nor that the poet had made a *rat-catcher* of Apollo.

Mr. Good's remarks on the different versions of the Iliad, here introduced, discover reading, acumen, and taste.

Having noticed a short poem, intitled *L'Avocat du Diable*, occasioned by the action for damages in the King's Bench,

brought by the late lord Lonsdale against Peter Pindar, for insinuating that Fuseli might paint, with success, his lordship for the devil, our biographer proceeds with his narrative; and, in describing his first interview with Dr. Geddes, presents so faithful a picture of his person and manner, that we cannot forbear to transcribe it.

'It was about this period, the year 1793, I first became acquainted with Dr. Geddes. I met him accidentally at the house of Miss Hamilton, who has lately acquired a just reputation for her excellent Letters on Education: and I freely confess that at the first interview I was by no means pleased with him. I beheld a man of about five feet five inches high, in a black dress put on with uncommon negligence, and apparently never fitted to his form: his figure was lank, his face meagre, his hair black, long and loose, without having been sufficiently submitted to the operations of the toilet—and his eyes, though quick and vivid, sparkling at that time rather with irritability than benevolence. He was disputing with one of the company when I entered, and the rapidity with which at this moment he left his chair, and rushed, with an elevated tone of voice and uncourtly dogmatism of manner, towards his opponent, instantaneously persuaded me that the subject upon which the debate turned was of the utmost moment. I listened with all the attention I could command; and in a few minutes learned, to my astonishment, that it related to nothing more than the distance of his own house in the New Road, Paddington, from the place of our meeting, which was in Guildford-street. The debate being at length concluded, or rather worn out, the doctor took possession of the next chair to that in which I was seated, and united with myself and a friend who sat on my other side in discoursing upon the politics of the day. On this topic we proceeded smoothly and accordantly for some time; till at length disagreeing with us upon some point as trivial as the former, he again rose abruptly from his seat, traversed the room in every direction, with as indeterminate a parallax as that of a comet, loudly and with increase of voice maintaining his position at every step he took. Not wishing to prolong the dispute we yielded to him without further interruption; and in the course of a few minutes after he had closed his harangue, he again approached us, retook possession of his chair, and was all playfulness, good humour, and genuine wit.' P. 300.

This is followed by other anecdotes that strongly marked the man.

Dr. Geddes's attachment to physiognomy as a science is instanced, together with his system on 'risiognomy,' accompanied with an anecdote of his skill in this branch of moral anatomy. The destruction of his treatise upon it, probably from a change of opinion, is related; his mechanical and horticultural employments are described; and an account is given of his *Three Secular Odes on the French Revolution*, and the translation which he published of GRESSET's *Ver-Vert*.

We are now arrived at Dr. Geddes's translation of the Bible, and Critical Remarks on the Pentateuch. Our judgement on these having been already given, we see no reason to depart from it for any thing Mr. Good has advanced; and, where a difference of opinion exists between us, we leave the decision to our readers, with the addition only of a short remark. Referring to an observation in our Review, Mr. Good has the following passage.

'Dr. Geddes has been reprehended by some of our professional critics for not having adopted or rather restored this more concise and energetic reading of "Be light, and light was," instead of continuing the more tame and circuitous version of the standard text. For myself, I heartily wish he had made such an exchange; yet it would have been but fair in the reviewer, who here reproves him for want of taste, to have added our author's own remark upon the subject, which is as follows: "*Let there be light, and there was light.*" The original, יהי אור ויהי־אור, is more concise and emphatical: "*Be light and light was.*" And this is the rendering of our first translator Wickliffe; who uniformly, in all similar phrases, uses the simple imperative: "Be light—be a firmament —produce earth—make we man." p. 339.

We had no design to misrepresent Dr. Geddes, as is here invidiously hinted; nor, on Mr. Good's mis-statement, notwithstanding the omission, can we admit ourselves amenable to the charge. On the contrary, if Dr. Geddes preferred the amendment suggested, and yet inserted in his text (to use Mr. Good's words), 'that vile expletive *there*,' the case is still worse. He could not mean, by so doing, to represent the original to the best advantage; and in fact his conduct is an avowal of the contrary:—

——— 'Video meliora, proboque;
Deteriora sequor.'

From the short specimen given of the Psalms, in the doctor's intended version, we have nothing material to anticipate; but we mean not to *prejudge*.

The manner in which Dr. Geddes executed his translation, brought upon him attacks from various quarters, but more especially from his catholic brethren. The opposition and difficulties he had, on this account, to encounter, were stated by him in *An Address to the Public*. Indeed the orthodoxy of Dr. Geddes had been questioned before his volume appeared; and, being summoned by those whom he admitted to be the organs of legitimate authority, he obeyed. His three judges, however, were either satisfied or silenced, much to the doctor's satisfaction. Shortly afterwards, the first volume of his translation was published; and the result was an ecclesiastical interdict, under the title of *A Pastoral Letter*, signed

by *Walmsley*, *Gibson*, and *Douglas*, as apostolic vicars of the western, northern, and London districts, in which doctor Geddes's work was published to the faithful. Against this prohibition (which bishop Thomas Talbot refused to subscribe) the doctor, first giving bishop Douglas notice, published a spirited remonstrance in a letter addressed to him. Dr. Geddes defended, with great spirit and considerable ability, not himself alone, but also sir John Throckmorton, who, for publishing a book these vicars apostolic could not answer, had been placed under the like interdict with the doctor himself. Previous, however, to such publication, a private correspondence took place between him and Douglas; the consequence of which was, that the doctor was suspended from all ecclesiastical functions.

The contumelies that Dr. Geddes received, made a deep impression on his mind, which even the consolations of his cousin the bishop of Dunkeld, and his patron lord Petre, were not able to efface. After an interval of some months, however, beginning to recover, he set out on a walk to Norfolk, during which he composed his Norfolk Tale, which contains a beautifully pathetic anecdote that does honour to his heart. This was followed by his *Ode to the Hon. Thomas Pelham—Metrical Translation of Dr. Colthurst's Sermon—The Battle of Bangor*, occasioned by Mr. Grindley's contest with the bishop—his anonymous *Fast-day's Sermon*, and *New-Year's Gift*.

These lighter occupations, however, did not draw the doctor from his Biblical pursuits. In 1800 he published the first and only volume he lived to finish, of Critical Remarks; at the end of which are the Latin verses that contain his creed as to the divine inspiration of Moses, thus rendered by himself:

'You ask me, serious, whether I believe
That Moses was inspired?—My friend, receive
This serious answer: Yes, he was inspired
With that same flame which Numa's bosom fired.
Numa, Lycurgus, every other sage
Who legislated for a barbarous age
All drank from Wisdom's fount, or Wisdom's rill;
Large draughts they drew—but Moses larger still.
Yet think not all the draughts that Moses drew
Were limpid draughts—sometimes a slimy hue
Beting'd the waters:—since the world began,
One man drew purely—Jesus was that man!
Jesus alone, full of the Godhead, brought
A code of laws divine, that lacketh nought.
Then dumb let other legislators be,
And Jesus only legislate for me.
Ah! Jesus! could I but thy law fulfil,
I'd deem myself beyond the reach of ill,

Each wish complete:—but thou to whom is "given,"
By thy great Sire, "all pow'r in earth and heaven,"
Do thou, my Hope! the hop'd-for aid impart,
And with celestial succour string my heart.
Supported thus, I joyfully will trace
Thy sacred footsteps with an eager pace.
Since thou hast said (whose words were never vain)
That he who runs with thee the prize shall gain,
"Me, me who follows, cannot miss the mark;
"He ne'er shall fall nor stumble in the dark"—
Thee, Jesus! thee I follow—as I may;
Be thou my light and leader on the way:
Tho' strait the path, its dangers I despise,
And trust with thee to reach the starry skies.' P. 468.

The doctor's experience of past difficulties had not been sufficient to fence off a similar return. His various publications had involved him with paper-makers and printers; and, having no other mode of extricating himself than by the assistance of friends, he took courage to make known his situation. Contributions were subscribed in his favour; and, in about two years and a half, 900*l.* sterling were raised, independently of the annuity paid by lord Petre. His heart was revived, and his *Modest Apology for the Roman Catholics of Great Britain*, was corrected and published. This work we consider as by far his best, but yet liable to many exceptions.

The fame, however, which his Modest Apology and his Bible had acquired abroad, led some foreigners of eminence to court his acquaintance. Amongst these occur the names of professor Timæus, general Miranda, Eichhorn, and Paulus, with all of whom he maintained a correspondence, of which a letter from each of the two last is given, as a specimen, in the Appendix.

Toward the close of this year (1800), in the exhiliration of good spirits, Dr. Geddes produced another macaronic, which he afterwards turned into English. The celebrated rencontre of Peter Pindar with the virulent Gifford suggested the idea of the *Bardomachia*, or *Battle of the Bards;* but, as the subject was temporary and disgraceful to the parties, both the poem and the combatants sunk into contempt.

The recruited health and good spirits of the doctor, in the following year, were severely checked by a deprivation that nothing could compensate. This was the loss of his patron, lord Petre, who died suddenly of the gout on the 2d of July. In bed, and debilitated with grief, Dr. Geddes gave vent to the emotions of his heart in a Latin elegy, which is among his best compositions, and of which Mr. Good has given a poetical version of equal merit with the original. Mindful of his friend, the noble lord bequeathed him an annuity of 100*l.* for life. This, though a permanency to the doctor, was but half the sum he before had received. Lest, however, the de-

falcation should be felt, it was proposed by Mr. Timothy Brown that the difference should be compensated by his former benefactors, engaging at the same time, on the failure of his proposal, to make up the deficiency himself.

For this generous offer there was no occasion. The present lord Petre no sooner perceived the expediency, than he most handsomely doubled his father's bequest. These repeated kindnesses somewhat soothed the mind of the sufferer, though they could not restore its original vigour. Dr. Geddes's literary efforts were again exerted, upon his version of the Psalms, and a Latin *Ode on the Return of Peace.* It would be uncandid, however, to remark their defects, as their author was now labouring under both mental depression and bodily pain. The latter arose from that dreadful malady, a cancerous affection of the rectum. This complaint, amid the most excruciating torture, admitted some intervals of ease; and, in one of these, he composed his *Elegy on the Death of Mr. Wakefield.* Considering the circumstances under which it was written, it certainly deserves considerable praise. Mr. Good has given it entire in the Life, followed by an English translation of his own.

'It was not,' says the ingenious biographer, 'more than a day or two afterwards that the bed on which he died was removed from his own chamber on the second floor into the front room, or chief library, on the first, in consequence of his being now incapable of moving either up or down stairs without extreme pain; and from this bed he scarcely ever rose afterwards. To this assertion I nevertheless remember one exception, and it affords a strong proof of the occasional triumph of the mind, when roused to a high degree of excitement, over all the pains and infirmities of the body. I called at his house one morning, doubtful whether I should find him alive or dead: he had not actually expired, but had refused admittance to all except his professional friends. He was alone, and requested to see me. He was lying on his bed agonized with torture, ghastly in countenance, and extremely depressed in his spirits. He seized my hand with avidity; "Forgive me, my dear friend!" said he abruptly, while the tears started from his eyes—"Forgive me this weakness! I did think I should have been able to have endured suffering with more fortitude and resignation; but I cannot support it, and am impatiently wishing for death." I endeavoured to console him—and added, that instead of accusing him of weakness, all his friends were astonished at the general tranquillity and strength of mind with which he submitted to his affliction. By degrees I drew him into a conversation upon one or two subjects which I knew lay nearest his heart. I introduced his version of the Bible; I requested information upon a passage in the Song of Soloman, which I was then in the act of translating: our ideas upon this passage did not altogether coincide; he became animated in the defence of his own opinion—he forgot the disease he was laboring under—suddenly rose from his bed—and to my utter astonishment ran rapidly up stairs in pursuit of some annotations of

his own, which he had formerly written upon the controverted question. I remained with him for about half an hour afterwards, and he still continued to enjoy himself: he suffered me to depart with great reluctance, and thanked me most cordially for the good I had done him. He soon, however, relapsed, and died a few days afterwards, February 26, 1802, in the sixty-fifth year of his age; the rites of his own communion having been regularly administered to him, and received with great consolation on his own part, by M. St. Martin, a catholic clergyman and confidential friend.' p. 518.

Concerning the circumstances attending the death of Dr. Geddes, and the malignant attack upon him in the Gentleman's Magazine (which was supposed to have travelled from Winchester), we cannot pass over the biographer's remarks, without applauding his zeal for his friend.

The account of Dr. Geddes's last interview with M. St. Martin is too interesting not to be inserted.

'M. St. Martin found the doctor extremely comatose, and believed him to be in the utmost danger: he endeavoured to rouse him from his lethargy, and proposed to him to receive absolution. Dr. Geddes observed that, in such case, it was necessary he should first make his confession. M. St. Martin was sensible that he had neither strength nor wakefulness enough for such an exertion, and replied that *in extremis* this was not necessary; that he had only to examine the state of his own mind, and to make a sign when he was prepared. M. St. Martin is a gentleman of much liberality of sentiment, but strenuously attached to what are denominated the orthodox tenets of the catholic church: he had long beheld, with great grief of heart, what he conceived the aberrations of his learned friend; and had flattered himself, that in the course of this last illness he should be the happy instrument of recalling him to a full belief of every doctrine he had rejected; and with this view he was actually prepared upon the present occasion with a written list of questions, in the hope of obtaining from the doctor an accurate and satisfactory reply. He found, however, from the lethargic state of Dr. Geddes, that this regular process was impracticable. He could not avoid, nevertheless, examining the state of his mind as to several of the more important points upon which they differed. "You fully," said he, "believe in the Scriptures?" He roused himself from his sleep, and said, "Certainly."—"In the doctrine of the trinity?"—"Certainly, but not in the manner you mean."—"In the mediation of Jesus Christ?"—"No, no, no—not as you mean: in Jesus Christ as our saviour—but not in the atonement." I inquired of M. St. Martin if, in the course of what had occurred, he had any reason to suppose that his religious creed either now, or in any other period of his illness, had sustained any shade of difference from what he had formerly professed. He replied, that he could not positively flatter himself with believing it had: that the most comfortable words he heard him utter were immediately after a short pause, and before the administration of absolution, "I consent to all;" but that to these he could affix no definite meaning. I showed him the passage to which I now re-

fer, in the Gentleman's Magazine:—he carefully perused it, and immediately added that it was false in every respect. "It would have given me great pleasure," said he, "to have heard him recant, but I cannot with certainty say that I perceived the least disposition in him to do so; and even the expression, 'I consent to all,' was rather, perhaps, uttered from a wish to oblige me as his friend, or a desire to shorten the conversation, than from any change in his opinions. After having thus examined himself, however, for some minutes, he gave a sign of being ready, and received absolution as I had proposed to him. I then left him: he shook my hand heartily upon quiting him, and said that he was happy he had seen me."

'It was the intention of this excellent priest to have visited him again in the evening, and to have passed the whole of the night in his room. On returning to the house, however, he was informed that the doctor's physicians had strictly prohibited his being seen by any of his friends that evening, in consequence of which M. St. Martin returned home with much reluctance; and on renewing his visit the next morning found he was just dead. A domestic of the catholic persuasion who lived in an adjoining house, and had been frequent in her inquiries concerning the doctor, knocked at his door as he was in the very act of dying; and his confidential servant, terrified at the appearance of her master, readily opened the door and requested her to walk up stairs. She beheld him almost at his last gasp, and immediately repeated, according to the rites of her church, the Creed, Paternoster, and Ave Maria: Dr. Geddes just opened his eyes as she had concluded, gave her his benediction, and expired.' P. 524.

Mr. Good closes the Life with a well drawn, but we think too flattering, character of his friend; who, on the whole, was certainly an extraordinary man; and, among great eccentricities, possessed many virtues.

ART. XI.—*Lectures on the Elements of Chemistry, delivered in the University of Edinburgh; by the late Joseph Black, M. D. &c. Now published from his Manuscripts, by John Robison, LL.D. &c. 2 Vols. 4to. 3l. 3s. Boards.* Longman *and* Rees. 1803.

WE introduce this work with peculiar satisfaction, and would recommend it, with an earnestness arising from a complete knowledge of its merits, to every philosophic inquirer. It is an admirable picture of scientific research, according to the plan proposed by Bacon, followed by Newton, and admitted by the best modern inquirers. The inductive reasoning is rigourously strict, the premises correctly stated, and the conclusion drawn with peculiar precision. The younger student may learn, from the professor's example, to reject fanciful analogies which have assumed the garb of demonstra-

tion; to distrust even more pointed similarities, unless tried under different forms, in circumstances carefully varied, and accurately noticed. He may be convinced that truth rarely yields to common exertions, that it must be extorted by various means, and demonstrated by repeated examples. In this view alone, the volumes before us would be highly valuable;—but they possess other merits.

The splendor of the discoveries which have enlightened modern chemistry has almost obscured * the useful, but less brilliant, irradiations of our ancestors; and, in our admiration of Lavoisier, Guyton, and Berthollet, we have almost forgotten Stahl, Boerhaave, Margraaf, and Boyle. The new nomenclature has contributed to throw them further back into the shades of oblivion; and, as we have had occasion to remark, if this new language be exclusively taught, we shall lose the valuable experience of more than a century. It must, then, be no inconsiderable advantage, that, while the value of every modern discovery is justly appreciated, each is connected with what former authors have attempted, and, in many respects, with what they have accomplished. The whole is brought forward in one view; and we have, at the same time, a connected system of both ancient and modern chemistry, in a form, and with advantages, far superior to those which any other work has offered. Dr. Black yielded slowly to the discoveries of the French chemists; and he yielded only after repeated trials and full conviction. At the same time, he warmly condemned the hasty conclusions of some authors; their random attempts without a determinate object; their experiments to support the most important doctrines, neither conducted with caution, nor varied with a guarded discrimination.

Dr. Black, if not strictly the parent of the modern doctrines, contributed greatly to expand the views of philosophers, and to direct them in the track which led to their discoveries. Hales knew that air was absorbed and again evolved in various processes; and Mayow, that this air, in different circumstances, varied in its properties. Dr. Black found, that, when air was separated from bodies, their qualities were changed; but that they regained their former properties on the re-union of the same principle. This was the case with calcareous earth, when fixed air was separated and again added. It is somewhat singular that he should not have combined this fact with the experiment of Hales, who showed that air was united to metals in their calcination. Phlogiston was, however, very generally believed to exist; and almost every fact seemed to unite in proving that this favourite

* Tenebræ per tantum lumen obortæ. Ovid.

principle was the cause of the metallic splendor and combustibility. Besides, as fixed air rendered caustic lime mild, it could scarcely be supposed that an aërial fluid would give pungency or causticity. Dr. Black, too, made a most singular and truly important discovery, that heat may, in an inactive state, become a component part of bodies; in other words, that it may be latent, and again, on separation, re-assume its active properties. This step led to our present knowledge of the nature of caloric, and was, in every view, of the highest importance. It was the foundation of the whole of the present system, which, in the more essential points, is apparently irrefragable.

Dr. Black, it has been said, was indolent. Candid and open in his disposition, there were no concealments in his communications. What he discovered, he freely explained; but his discoveries were not numerous. He cautiously followed the labours of others, correcting, adding to, or confirming, their observations. His own remarks were scattered without a parent's fondness, and with little of parental anxiety. He lived free from controversy, calm, respected, and happy.

We have wandered from the work, while dwelling, with all the warmth of former friendship, on its author. We have wandered, too, from the editor, in contemplating the subject of his anxious attention; yet we need not stay to speak of his early connexion with Dr. Black—a connexion ripened into sincere affection—nor of the difficulty of collecting the Sibylline leaves from which the professor usually lectured. He has, we believe, with honest zeal performed the office of a friend; and perhaps few could have succeeded so well in giving a connected view of Dr. Black's class. We have every reason to be satisfied with the state of the work before us; nor is it one of its least advantages, that we are led by the author in the steps which Dr. Black himself took in completing these discoveries.

The life of the doctor is written with the zealous warmth of affection, from information contained in the biographic sketch read to the Royal Society of Edinburgh by his friend and relation Dr. Adam Ferguson. It is, indeed, written like the French *éloges*, with too apparent an eagerness to praise; and the author not only oversteps the bounds of probability, but sometimes those of strict accuracy. Dr. Black was *not* always averse to hypotheses; but they were not incorporated into his system; they had no influence on his reasoning. One we particularly remember, *viz.* where he supposed his fixed air to be a compound of common air and phlogiston. That Dr. Black was ever a popular or a successful medical practitioner, we doubt. His caution, his hesitation, the phi-

losophic coldness of his manner, would prevent his attaining either character; and we well recollect, that, on the death of Dr. Gregory, he was with some effort brought forward as a practical physician; yet, even then, either from disinclination, or other causes, he had but a temporary and inconsiderable share of occupation. Dr. Cullen was his early and constant friend; yet we suspect that he did not view him with complacency, as a chemical discoverer—the department in which he himself was anxious to shine; and many insinuations against the doctrine of latent heat, might, we believe, be traced to that source. On the other hand, the biographer steps from his line, when, in praising Dr. Black's caution, modesty, and attention, he speaks with a little disapprobation of others who seise on general principles, and attempt to convey the force and effect of numerous facts in one proposition. That these remarks are aimed at Dr. Cullen, it is sufficiently obvious; but each author may have investigated truth in different ways. Dr. Cullen might seise, with boldness, a spectre; and, on the gradual introduction of light, determine whether he grasped a vapour or a goddess: Dr. Black, with more timid caution, might carefully examine whether it were a phantom or a reality; and yet each, in different ways, may be equally successful. Because one succeeds, it is not certain that the other must fail. Our biographer's observations relate to Dr. Black's medical lectures, where Dr. Cullen's happy boldness was more successful; while, in chemistry, the former attained a considerable degree of reputation by a contrary conduct.

Dr. Black was born at Bourdeaux. His father, an Irishman, but of Scottish descent, appears to have supported a character truly respectable, as a man of strict integrity, candour, benevolence, and ability. He was the friend of the president Montesquieu. Dr. Black was sent to Glasgow at the age of twelve; and, at an early period, engaged warmly in the study of chemistry and medicine. This ardour was fostered by Dr. Cullen, at that time beginning the career which he afterwards ran so successfully—a career that will soon be forgotten, as, among his numerous pupils, not one has been found to rescue his merits from oblivion *. Mr. Black went from Glasgow to Edinburgh in 1751, and graduated there in 1754, regularly attending the lectures, without availing himself of the privileges he might have claimed from his previous studies. The first germ of his discoveries was published in his 'Thesis;' but his earliest ideas are to be traced in his

* As nearly fourteen years have elapsed since his death, we thought ourselves justified in this remark. We find, however, on inquiry, that the doctor's family have received numerous offers of assistance, but do not seem inclined to communicate information to any one.

numerous *memoranda*, to the year 1752, and may have occurred earlier. These relate to the cause of the causticity of lime. In 1756 he was appointed professor of anatomy, and *lecturer* in chemistry, in the university of Glasgow, on the removal of Dr. Cullen to Edinburgh. This professorship he soon exchanged for that of medicine.

'His lectures, therefore, on the Institutes of Medicine, were his chief task. They gave the greatest satisfaction, by their perspicuity and simplicity, and by the cautious moderation of all his general doctrines. It required, however, all this perspicuity, and all this neatness in the manner of exhibiting simple truths, to create a relish for this great moderation and caution, after the brilliant prospects of systematic knowledge, to which the students had been accustomed from the doctor's celebrated predecessor. But Dr. Black had no wish to form a medical school, which should be distinguished by some all-comprehending doctrine. He contented himself with giving a clear and systematic account of as much of physiology as he thought founded on good principles, and a short sketch of such general doctrines as were maintained by eminent authors, but perhaps on a less firm foundation. Without this, he said that his students could not read their writings, which, in other respects, were highly valuable. He then endeavoured to deduce a few canons of medical practice; and concluded with certain rules, founded on successful practice only, but not so deducible from the previously delivered principles of physiology; observing that we should not despair of being able, on some future day, to proceed in the opposite direction, deducing the first principles entirely from the practice. It does not appear, however, that he had ever satisfied himself with his method of treating those subjects. He did not encourage conversation on those topics; and there are no remains of his medical lectures to be found among his papers. I owe the account now given of them to a respectable surgeon in Glasgow, who attended these lectures in the two last years of his professorship in that university.' P. xxix.

From his professorship having engaged so much of his attention—for the lectureship seems a subordinate office—Mr. Robison accounts for Dr. Black's not having followed with more ardour his chemical pursuits, and prosecuted more eagerly the discoveries so truly his own. We fear, however, that Dr. Black's mind was at no period very active. He smoothed the road which required too great labour to institute. He corrected what would have been too toilsome to create: no one's views were more clear, distinct, and philosophic: no one formed opinions more precise, or judgements more accurate and discriminated.

From the year 1759 to 1763, he brought to maturity his opinions respecting latent heat, the substance of which he read to a literary society at Glasgow in 1762;—a system not speculative only; not dry, barren, and inapplicable to the

uses of mankind, but of the greatest practical importance, though the leading fact was already known.

'Fortunately for Dr. Black, and for the world, he had now gotten a pupil who was as keenly interested in this scientific question as the professor. This was Mr. James Watt, then employed in fitting up the instruments in the M'Farlane Observatory of the university; a philosopher, in the most exalted sense of the word, who never could be satisfied with a conjectural knowledge of any subject, and who grudged no labour or study to acquire certainty in his researches. He chanced to have in his hands, for repairs, a model of Newcomen's steam-engine, belonging to the Natural Philosophy class, and was delighted with the opportunity which this small machine gave him for trying experiments connected with the theory of ebullition, which he had just learned from Dr. Black. These he prosecuted in a most happy train of success, and did not stop, till his steam-engine was rendered more like the most docile of animals, than a frame of lifeless matter; so that, while its power is competent to the lifting a house from its place, a child of ten years old shall, with a touch of his hand, make it go fast or slow, forwards or backwards, and act either powerfully or feebly. This gentleman, attached to Dr. Black by every tie of respect, esteem, and affection, supplied him with proofs and illustrations in abundance, of all the points on which the professor wanted information. These were always recited in the class, with the most cordial acknowledgment of obligation to Mr. Watt. Mr. Irvine, also, a young student of medicine, of a quick apprehension, sound understanding, and particularly disposed to consider every thing mathematically, was at this time a hearer of Dr. Black's lectures, and greatly captivated with chemical science. He engaged, with great pleasure and zeal, in all examinations which seemed to interest the professor, and particularly such as would admit of mathematical consideration;—thermometrical experiments on the scale of heat;—on the connection between expansion and variation of temperature; on the measures of heat, &c.;—all these were fields of research altogether to his mind. He supplied Dr. Black with a vast number of experiments on the equilibrium of heat, on the specific heats of different substances, and on the continued absorption and fixation of heat by glass, sealing-wax, resin, and other substances, which gradually become more fluid. The register of these experiments are in my possession, and are similar to those which now fill many pages of the Memoires of the Foreign Academies,' p. xliii.

Mr. Robison enlarges very satisfactorily on the importance of Dr. Black's doctrine, and the consequences to be drawn from it, in the explanation of the various phænomena of nature. In 1766, Dr. Cullen was appointed professor of the Institutes of Medicine, and Dr. Black was invited from Glasgow, to succeed him in the chemical chair. 'Had it depended,' observes the biographer, 'on the university, he would have been appointed to this office on the death of Dr. Plummer,

though so shortly after his graduation;' but of this not the slightest evidence appears. The following remarks we have already alluded to.

'Such a man was of the highest value to a celebrated seminary of learning. Ingenious men, of a fertile and lively imagination, are but too apt to give a loose to their fancy, in forming wide-grasping theories, and dressing them out in specious attire. The young student, ardent and credulous, is dazzled by what appears a strong and wide-spreading light, not remarking that perhaps it is not the natural emanation from a luminary, but is artificially collected by mirrors and glasses; or that what he takes for real objects are only the shadowy representations by a magic lanthorn. To this, in a great measure, may we ascribe the continual flux of theory which may be observed in all universities. Yet the consequences to science are most unfortunate. Not only do the precious years of youth and of mental energy pass on without solid instruction, but also the most unfortunate of all habits is acquired, that of considering the extensive and plausible application of a theory to the explanation of phenomena as a valid proof of its truth. But, on the other hand, the lectures of such a teacher as Dr. Black, never permitting this play of fancy, and even rarely introducing conjecture, would be safe lessons for ingenuous youth. The affirmations of the professor may be trusted as matter of experience, and the student will acquire betimes the habit of never proceeding, in research of any kind, without sounding the channel as he advances.

'Dr. Black was appointed to the chemical chair at Edinburgh, to the general satisfaction of the public; but the university of Glasgow thence sustained an irreparable loss. In this new scene, his talents were more conspicuous, and more extensively useful. He saw this; and while he could not but be highly gratified by the great concourse of pupils, which the reputation of the medical colleges of Edinburgh brought to his lectures, his mind was forcibly impressed by the importance of his duties as their teacher. This had an effect, of which it is difficult to say whether it has been fortunate for the public or not. Dr. Black now formed the firm resolution of directing his whole study to the improvement of his scholars in the elementary knowledge of chemistry. He saw too many of them with a very scanty stock of previous learning. He had many from the workshop of the manufacturer, who had none at all; and he saw that the number of such hearers must increase with the increasing activity and prosperity of the country: and these appeared to him as by no means the least important part of his auditory. To engage the attention of such pupils, and to be perfectly understood by the most illiterate, was therefore considered by Dr. Black as his most sacred duty. Plain doctrines, therefore, taught in the plainest manner, must employ his chief study. That no help may be wanting, all must be illustrated by suitable experiments, by the exhibition of specimens, and the management of chemical processes. Nice and abstruse philosophical opinions would not interest such hearers; and any doctrines, inculcated in a

refined manner, and referring to elaborate disquisitions of others, would not be understood by the major part of an audience of young persons, as yet only beginning their studies.' P. xlix.

Mr. Robison next gives a general and pleasing view of the progress of pneumatic chemistry, and accounts for the continued inactivity of Dr. Black in these researches, from the weak state of his health, and the frequent necessity of relaxation of thought, as well as of gentle exercise. The numerous inquirers into the nature of gases borrowed freely, with little acknowledgement, from our professor; though he has in no instance retorted, or even claimed his own productions. Some disingenuity in Lavoisier roused him to exertion; but it was the hectic of the moment: the angry passions had decayed, or never existed; and we are told that not a trace of resentment or ill-will remained.

What were the instructions of Dr. Black at Edinburgh, and what was his mode of life, are sufficiently known. Mild, gentle, benevolent, and communicative, he seemed more than ordinarily happy when he could assist, entertain, or instruct. With a few friends of peculiar talents; with the esteem of all those who knew, and were able to appreciate, his abilities and virtues; with the universal regard of those whom nothing more than his name and character had reached, he lived with comfort, and ceased to breathe—for death had none of its attendant struggles or pains—when the last thread of a feeble constitution would support life no longer.

'I have already observed, that when I was first acquainted with Dr. Black, his aspect was comely and interesting. As he advanced in years, his countenance continued to preserve that pleasing expression of inward satisfaction, which, by giving ease to the beholder, never fails to please. His manner was perfectly easy, and unaffected, and graceful. He was of most easy approach, affable, and readily entered into conversation, whether serious or trivial. His mind being abundantly furnished with matter, his conversation was at all times pertinent and agreeable: for Dr. Black's acquirements were not merely those of a man of science. He was a stranger to none of the elegant accomplishments of life. He therefore easily fell into any topic of conversation, and supported his part in it respectably. He had a fine or accurate musical ear, and a voice which would obey it in the most perfect manner; for he sung, and performed on the flute, with great taste and feeling; and could sing a plain air at sight, which many instrumental performers cannot do. But this was science. Dr. Black was a very intelligent judge of musical composition; and I never heard any person express so intelligibly the characteristic differences of some of the national musics of Europe. I speak of Dr. Black as I knew him at Glasgow: after his coming to Edinburgh, he gave up most of those amusements. Without having studied drawing, he had acquired a considerable power of expression with

his pencil, both in figures and in landscape. He was peculiarly happy in expressing the passions; and seemed, in this respect, to have the talent of a history painter. He had not had any opportunities of becoming a connoisseur; but his opinion of a piece of painting, or sculpture, was respected by good judges. Figure, indeed, of every kind, attracted his attention;—in architecture, furniture, ornament of every sort, it was never a matter of indifference. Even a retort, or a crucible, was to his eye an example of beauty or deformity. His memorandum books are full of studies (may I call them) of this sort; and there is one drawing of an iron-furnace, fitted up with rough unhewn timber, that is finished with great beauty, and would not disgrace the hand of a Woollet. Naturally, therefore, the young ladies were proud of Dr. Black's approbation of their taste in matters of ornament. These are not indifferent things; they are features of an elegant mind, and they account for some part of that satisfaction and pleasure which persons of all different habits and pursuits felt in Dr. Black's company and conversation.' P. lxvi.

His only works were his 'Thesis de Acido a Cibis orto e de Magnesia;' his Experiments on Magnesia, Quick-lime, and other alkaline Substances, published in the second volume of the Physical and Literary Essays of Edinburgh, 1756; Observations on the more ready Freezing of Water that has been boiled, published in the Philosophical Transactions, 1774; and The Analysis of the Waters of some of the boiling Springs of Iceland, in the Edinburgh Transactions. The Observations on Magnesia, &c. were, we believe, published separately at a subsequent period.

We lately remarked, that the definition of chemistry has been a subject of much difficulty, and some contest. Dr. Black, after examining the definitions of different authors, observes, that 'the chemist studies the effects produced by heat and mixture in all bodies, or mixtures of bodies, natural or artificial, and studies them with a view to the improvement of arts, and the knowledge of nature.' It is not proper, at this time, to commence a verbal controversy; but we think the definition exceptionable. The object of a science is not, justly, a part of its definition; and the term 'mixture' does not, in common language, imply composition. What we suggested in the last number of our Second Series, p. 379, will more perfectly discriminate the science of chemistry. We there supposed it to comprehend 'the doctrine of the mutual action of the smaller particles of matter, either in decomposing natural bodies, or producing new compounds.' Dr. Black objects to the synthetic form of teaching this science on a different foundation from that on which we rested our opposition. He thinks chemistry by no means advanced to such a state of perfection as to admit of general principles. It must still be pursued by analysis.

As the extent of our article will not permit us at present to enlarge on the work itself, we shall add the author's general design, in his own words, from one of his introductory lectures preserved in the notes.

'There is just now a rage for system,—for complete systems. We have got such a high conceit of our knowledge, that we cannot be pleased with a system which acknowledges any imperfection: it must not leave one open link: it must not leave any thing unexplained. And I see it always happen that if the application of a system to the explanation of phenomena be very comprehensive, leaving no blanks, and if the explanation have some feasibility, this catches the fancy,—it dazzles the understanding. Nay, we think it impossible that a principle that is false can tally with so many phenomena. This seeming coincidence is considered as a proof of its validity; and we are no longer solicitous about the direct proofs adduced in the beginning. I have often heard such arguments for what I knew to be great nonsense. This kind of authority accruing to a theory from its specious and extensive application to phenomena, is always bad; and, with mere beginners in philosophy, it is doing them an irreparable hurt. It nourishes that itch for theory; and it makes them unsolicitous about the first foundations of it;—thus it forms in their minds the worst of all philosophical habits.

'I am resolved to go on in a very different way. I subscribe to almost all Mr. Lavoisier's doctrines; and I will teach them all. And I affirm that I shall teach them with an impression of their truth which his method can never make. My students shall get all these doctrines piece-meal;—every one of them by steps which shall be quite easy and confident, because they shall be acquainted with every substance before I employ its phenomena as proofs. Each of Mr. Lavoisier's doctrines shall arise in course, as a small and obvious addition to the properties of some substance already known. Then I shall carry the student back, and shew him that the influence of our new discovery extends also to those substances which we had been considering before. Thus, all the doctrines will be had easily, familiarly, and with confidence in their truth.

'I even think that this method will be more pleasant,—the novelties, or reformations, being, by this method, distributed over the whole course. And it will have yet another advantage: it will make the student acquainted with the chemistry of former years, which is far from being unworthy of the attention of a philosopher. Newton, Stahl, Margraaf, Cramer, Scheele, Bergmann, were geniuses not below the common level. But the person who learns chemistry by Lavoisier's scheme may remain ignorant of all that was done by former chemists, and unable to read their excellent writings.' P. 548.

We need not apologise for the length of this quotation: the observations are truly excellent. The work itself we shall soon again resume.

ART. XII.—*Observations on the Theory and Practice of Landscape Gardening. Including some Remarks on Grecian and Gothic Architecture, collected from various Manuscripts in the Possession of the different Noblemen and Gentlemen for whose Use they were originally written; the Whole tending to establish fixed Principles in the respective Arts. By H. Repton, Esq.* 4to. 5*l.* 5*s. Boards.* Taylor. 1803.

WE are equally pleased with the modesty, the ability, and the good sense, of the very able author before us. His observations are dictated by an attentive survey of nature, whom he follows without servility, or a slavish adherence to system. His remarks tend, in his own opinion, to establish fixed principles in the art of landscape and gardening; but even in this belief, though modestly exprest, we think Mr. Repton advances too far; for taste, rather than principles, must decide; and where the circumstances are so various, the exceptions so numerous, and the established rules so few, we fear that landscape-gardening can never become a science. The dictates of good taste will always raise the profession above caprice; those of good sense will always preserve it from ridiculous affectation.

'Had the art still continued under the direction of working gardeners, or nurserymen, the proprietor might supersede the necessity of such landscape gardeners, provided he had previously made this art his study; but not, (as it is frequently asserted) because the gentleman who constantly resides at his place, must be a better judge of the means of improving it, than the professor whose visits are only occasional: for if this reason for a preference were granted, we might with equal truth assert, that the constant companion of a sick man has an advantage over his physician.

'Improvements may be suggested by any one, but the professor only acquires a knowledge of effects before they are produced, and a facility in producing them by various methods, expedients, and resources, the result of study, observation, and experience. He knows what can, and what cannot be accomplished within certain limits. He ought to know what to adopt, and what to reject; he must endeavour to accommodate his plans to the wishes of the person who consults him, although, in some cases, they may not strictly accord with his own taste.' P. 9.

We cannot accede to the whole of these remarks; but it is chiefly because some few explanatory terms are wanted. Mr. Repton speaks of a proprietor in general terms; but if he be a person of abilities and observation, he ought at least to be admitted to the consultation, and to give his opinion carefully matured. He has seen the spot in all the vicissitudes of aërial perspective, and they are necessarily numerous; in the varied light

of different hours and different seasons. The professor knows what the effects of proposed improvements will be; but he may not be able to judge of them so accurately in the individual spot. It is precisely in this point that we fear the fixed principles, unless more securely founded, may mislead: they may preclude minute observation; they may supercede it. Mr Repton's good sense will undoubtedly see this in its proper light, and agree with us in limiting the influence of principles.

In other respects, the preface is modest and judicious. Mr. Repton wishes his professional character to rest on his opinions in writing, rather than on the works executed from his suggestions, since many of these may have been partially and imperfectly performed. His professional creed is added, to prevent mistakes. The belt and the group he considers as errors; but some of his objections are not sufficiently limited to procure our assent. In the third, for instance, it is observed, 'that an approach which does not evidently lead to the house, or which does *not take the shortest course*, cannot be right.' The shortest course is a straight line; and, if the entrance be opposite the house, the effect will not correspond with Mr. Price's ideas of the picturesque. We mention this chiefly to remark, that these canons are not expressed with sufficient clearness.

The principles which Mr. Repton endeavours to establish, are relative fitness (or utility), and comparative proportion (or scale). These may undoubtedly be subdivided into numerous positions, whose influence would be extensive and important. We may allow them to proceed as far as circumstances will support them: yet we fear, in the numerous subordinate arrangements, we shall soon lose their influence. They are illustrated by the author's improvements at the Fort near Bristol, and at Holkam. We may, from his practice in these places, develope one of his favourite principles; we say develope, for it is his own—*viz.* in any great inequality or deformity of ground, the artist should not endeavour to remove it altogether: he may soften it, and will often be able to transform it to a beauty. There are a variety of instances of the application of this principle in the chapter before us, where it is very happily illustrated.

The second chapter is on Optics, the Effects of Distance, Light, &c. Many of the observations are truly ingenious; and from them we shall select a remarkable one, with its explanation.

'Query, At what distance does any object appear at its greatest height?

"The general optical distinction of the magnitude of objects

is into real and apparent; the real being what its name imports, and the apparent not that which may ultimately result to the mind, but that which is immediately impressed on the eye. This is measured by a plain and certain rule, namely, the angle, which is formed at the eye by lines drawn from the extremities of the object. The apparent height of a man therefore at a quarter of a mile distance, is not the conception which we form of his height, but the opening or angle of the two lines above mentioned, viz. of the two drawn from the extremities of the object to our eye. This apparent height therefore of any object, will be measured always upon the simplest principles; and will vary according to, first, the distance of the object; secondly, the inclination it makes with the horizon; and thirdly, our relative elevation or depression. Any two of the above three things continuing the same, the apparent magnitude will decrease with the third, though not in exact proportion to it.

"Thus the object being perpendicular to the horizon, and our elevation remaining the same, its apparent height will decrease with the distance. Our elevation and the distance remaining the same, the apparent height of the object will decrease with its inclination to the horizon. The inclination and distance being the same, the angle, or apparent height, will decrease with our elevation or depression, supposing our height was at first the middle point of the object. This last being liable to some exceptions, the general rule is, that the distance from the object, measured by a perpendicular to it, being the same, the point at which its apparent height will be greatest, is, where the perpendicular from the eye falls upon the centre.

"The apparent height of a body, as upon the same principles any other of its dimensions, is a matter of easy consideration; its inclination, its distance, and the relative position of the observer being known. The difficulty is to know what the conception is that we shall form of the height and magnitude of an object; according to different circumstances, its apparent height, as well as its real height, remaining the same. This you will see belongs to wholly different principles, and such as cannot be reduced to certain rules; it appears too from hence, that the question has little or nothing to do with mathematical principles, at least beyond those simple ones which I have just stated. Of other principles, the consideration is more diversified: much may be ascribed to the habit, which we probably have, of estimating the height of objects, not by the angle formed by lines to the summit and the base, when the base is below us, but by that formed between a line from the summit and a line parallel to the horizon; in this way our conception of the magnitude may be less, while the apparent magnitude may be greater. A thousand other causes may likewise operate, amongst which will be some that belong to what is called aërial perspective, or those rules by which we judge of the distance or dimensions of objects, not by their outline on the retina, but by their colour and distinctness. The existence and operation of these can hardly be found, but by a careful examination and comparison of particular instances." P. 16.

One of the causes supposed to operate, independently of mathematical principles, is derived very ingeniously from the position of the eye. In consequence of the overhanging brow, the angle which the visual ray makes below the axis of vision, is much greater than it can make by a beam of light falling from above. The respective angles are 58° and 28°. Some other minute circumstances, respecting the field of vision, are truly important, and applicable to this science. The illustrations of the views of Purley, 'morning and evening,' are in support of the observations we made respecting the assistance of the proprietor in arranging his own grounds. Mr. Repton's good sense will easily follow our remarks in their more extended variety.

The management of water, the subject of the third chapter, is excellent. Trees will grow out of proportion to a place, as exemplified in West Wycombe. This leads us to some reflexions in which we must be indulged. We shall only anticipate a little our author's remarks.

When a spot is first planted, the trees and their foliage are adapted to the scenery. In time, what was first umbrageous, becomes gloomy; what was once shade, a 'browner horror.' We have seldom been able to convince a proprietor of the necessity of an anxious attention to this point, and a regulated care to supply, by degrees, younger trees, to compensate for those whose foliage becomes too massy. In fact, the idea of plantation-gardening being a science, has forbidden the intrusion of any unhallowed hand. A shady line looks well; a massy one is gloom and midnight.

Mr. Repton proposes, in a subsequent part of the work, to thin the wood, leaving projecting trees. In many places, the line is too thin for this purpose; and we have advised plantations in front. In general, this should be done earlier; and a few trees calculated to supply deficiencies, even *with* cradle fences, will not injure the view. In every instance, trees should be planted more freely than they will be at last wanted, since it is easier to cut down than to raise.

Mr. Repton's observations respecting the line of trunk, and a line which is formed by the browsing of deer on the lower branches, are judicious; but he does not sufficiently advert to the character of trees, or adapting their character to their situation with respect to the house. The morning and evening are the periods of picturesque views; and the trees should be of such classes, that, when above, below, or level with, the eye, while the sun is a few degrees superior to the horizon, the lights and shades should be strongly marked. The sycamore, the oak, and the elm, afford these effects: the beech is too massy, except for a contrast: the poplar, be-

yond a certain age, is a dark sugar-loaf. One of the strongest and most striking features in the present work, is the great judgement with which the author thins the woods, breaking them into distinct masses, or letting in more slightly the adjoining country.

Another point, of scarcely less importance, is the propriety of his directions when it is necessary to hide disagreeable objects or views, and the effects of trees of unequal ages, and consequently heights, in appropriated situations.

The management of water is very difficult. Though nature place lakes on high hills, we think with our author that the eye is hurt in observing them; and, from the height, no adequate effect can be produced. Water, however, should be forced as little as possible; for we have never found violent attempts succeed. Imitating the rocky bed is one of the happiest and most successful expedients. Pipes are choaked; the ground which carries artificial water suffers it to soak through, or the surrounding meadow absorbs it, and becomes a marsh.

Fences are a subject of minute disquisition; yet we own that we see no real inconvenience in a light wire rail that does not confine the eye. If any inconvenience should ensue, a sunk fence may be adopted, with an ornamental drawbridge, which may in form resemble a seat, and be easily brought round by means of a windlass; or the sharp angle of the sunk fence may be softened in one part, so as to admit of an easy descent, which may be guarded by a light iron gate. The house, it is observed, is an artificial object; but where should artifice end, and nature begin?—at the threshold, say Mr. Brown and Mr. Price; at some indefinite distance, is our author's opinion. Much will, however, depend on the nature of the place and of the prospects. If we must have a rule, we would say, so far as the unassisted sight can reach should be ornamented. Beyond, nature may gradually offer objects less adorned, turf less 'trimly shorn,' till she is allowed to expand in all her bolder luxuriance.

The distinctions between the park and the farm are well pointed out; and the abode of rural labour can scarcely, with any care, appear an ornamented domain. Indeed a neat well-conducted farm is in itself no unpleasing object; and even its appurtenances are not without their beauty, under proper management. What relates to flower-gardens and hot-houses is very judicious. The following remarks merit attention; but we have some doubts whether the green-house at Plas-Newyd has sufficient light for many of the plants, when duly hardened, to be taken from the conservatories.

'There is one very material objection to a green-house immediately attached to a room constantly inhabited, viz. that the smell and damp from a large body of earth in the beds or pots, is often

more powerful than the fragrance of the plants, therefore the conservatory should always be separated from the house by a lobby or small anti-room. But the greatest objection arises from its want of conformity to the neighbouring mansion, since it is difficult to make the glass roof of a conservatory architectural, whether Grecian or Gothic.

'An arcade is ill adapted to the purpose, because by the form of an arch the light is excluded at the top, where it is most essential in a green-house, for this reason, the flat Gothic arch of Henry the Eighth is less objectionable, yet in such buildings we must suppose the roof to have been taken away to make room for glass; of this kind is the conservatory in front of Rendlesham House.

'In the adaptation of ancient forms to modern uses and inventions, we are often under the necessity of deviating from the rules of true Gothic. Under such circumstances it is perhaps better to apply old expedients to new uses, than to invent a new and absurd stile of Gothic or Grecian architecture. At Plas-Newyd, where the house partakes of a Gothic character, I suggested the addition of a green-house, terminating a magnificent enfilade through a long line of principal apartments. The hint for this model is taken from the chapter rooms to some of our cathedrals, where an octagon roof is supported by a slender pillar in the middle, and if this were made of cast-iron, supporting the ribs of a roof of the same materials, there would be no great impropriety in filling the interstices with glass, while the side window frames might be removed entirely in summer, making a beautiful pavilion at that season when the plants being removed, a green-house is generally a deserted and unsightly object. The effect of this building by moonlight is shewn in the annexed sketch. And there are many summer evenings when such a pavilion would add new interest to the magnificent scenery of water and mountains with which Plas-Newyd every where abounds*.' P. 104.

In the ninth chapter, Mr. Repton proceeds to the defence of the art, or rather to his objections against regulating

'* In a conversation I had the satisfaction to enjoy with the late earl of Orford, at Strawberry Hill, he shewed me the gradual progress of his knowledge in Gothic architecture by various specimens in that house, in which he had copied the forms of mouldings without always attending to the scale or comparative proportion; and his lordship's candour pointed out to me the errors he had at first committed. This error, in the imitators of Gothic, often arises from their not considering the difference of the materials with which they work: if in the mullions of a window, or the ribs of a ceiling, they copy in wood or plaster, ornaments originally of stone, they must preserve the same massive proportions, that were necessary in that material, or they must paint it like wood, and not like stone: but if the architects of former times had known the use we now make of cast-iron, we should have seen many beautiful effects of lightness in their works; and surely in our's, we may be allowed to introduce this new material for buildings, in the same manner that we may fairly suppose they would have done, had the invention been known in their time: but wherever cast-iron is used in the construction, it ought to be acknowledged as a support, either by gilding, or bronze, or any expedient that may shew it to be metal, and not wood or stone, otherwise it will appear unequal to its office.'

the science of landscape-gardening by the rules of the landscape-painter. This he executes very successfully.

'The best painters in landscape have studied in Italy, or France, where the verdure of England is unknown: hence arises the habit acquired by the connoisseur of admiring brown tints and arid foregrounds in the pictures of Claude and Poussin, and from this cause he prefers the bistre sketches to the green paintings of Gainsborough. One of our best landscape painters studied in Ireland, where the soil is not so yellow as in England; and his pictures, however beautiful in design and composition, are always cold and chalky.

'Autumn is the favourite season of study for landscape painters, when all nature verges towards decay, when the foliage changes its vivid green to brown and orange, and the lawns put on their russet hue. But the tints and verdant colouring of spring and summer will have superior charms to those who delight in the perfection of nature, without perhaps ever considering whether they are adapted to the painter's landscape.

'It is not from the colouring only, but the general composition of landscapes, that the painter and landscape gardener will feel the difference in their respective arts; and although each may occasionally assist the other, yet I should no more advise the latter, in laying out the scenery of a place, to copy the confined field of vision, or affect the careless graces of Claude or Poussin, than I should recommend as a subject proper for a landscape painter the formal rows or quincunx position of trees in geometric gardening. It has been wittily observed, that "the works of nature are well executed, but in a bad taste;" this, I suppose, has arisen from the propensity of good taste, to display the works of nature to advantage; but it does not hence follow that art is to be the standard for nature's imitation; neither does it disgrace painting, to assert that nature may be rendered more pleasing than the finest picture; since the perfection of painting seldom aims at exact or individual representation of nature. A panorama gives a more natural idea of ships at sea, than the best picture of Vanderveld; but it has little merit as a painting, because it too nearly resembles the original, to please as an effort of imitative art. My sketches, if they were more highly finished, would be a sort of panorama, or *fac simile*, of the scenes they represent, in which little effect is attempted on the principle of composition in painting; but, like a profile shadow or silhouette, they may please as portraits, while they offend the connoisseur as paintings. The art I profess is of a higher nature than that of painting, and is thus very aptly described by a French author.

"Il est à la poèsie et à la peinture ce que la réalité est à la description et l'original à la copie." P. 109.

These remarks are very judicious, and deserve attention: they are illustrated by some projected improvements at Sufton-Court and Attingham.

Ancient and modern gardening are next considered; but the remarks are few, and not very important. Mr. Repton

judges well in advising to preserve the terraces, particularly those belonging to houses which, from their venerable antiquity, render such an addition not unsuitable. Indeed to others they are often a great advantage; and we have been frequently disgusted, when, on surveying grounds *with the latest improvements*, we have been carried only through sheep-walks, each of us following his companion—for sheep-walks, *by comparison*, they were. The miscellaneous chapter is entertaining, rather than interesting. We are not particularly pleased with hiding the neat retired house with a Doric portico, nor with the open view of the cottage at Blaize Castle. On the whole, however, Mr. Repton's opinions and taste merit our commendation. What he minutely attends to, through the work, is proportion; not only of one part to another, but a general suitability, as it may be styled, of the parts to the whole. His defence of cottages, also, we read with pleasure; and his observations on ornaments are, in general, judicious.

Architecture forms the next part of the work; and Mr. Repton treats it with ability—the result of close attention. He is not minutely scientific; but his directions are referable to the comforts and conveniences of society in its present state. The style of buildings, in different æras, is well discriminated; and the Gothic ornaments, as in temper with the castle and the church, are properly distinguished. The aspect of a house he would direct towards the south. The Jesuits, who understood the comforts and the luxuries of this life better than any other men, preferred the east; and much is to be said in its favour, even in this climate. To see every object gilded through almost the whole of the day, without the glare or the heat of the sun, is, to us, no slight advantage. A library should have always an eastern aspect; and by trees, or other contrivances, the green rays should be almost exclusively reflected.

The style of a magnificent house should, in our author's opinion, be the Gothic, or, rather, consist of that extended varied front, to which courtesy, in these times, allows the appellation of Gothic. All within, is, however, to be modern; and no external parts are to be permitted, which will interfere with the light, the comforts, and conveniences, of the habitation. Two or three of our author's remarks, in favour of this style, we shall add.

'5. This degree of irregularity seems often to have been studied in order to produce increased grandeur by an intricacy and variety of parts. A perfect correspondence of two sides assists the mind in grasping the whole of a design on viewing only one half; it therefore, in fact, lessens the apparent magnitude, while the difficulty with which dissimilar parts are viewed at once, increases the apparent dimensions, provided the eye be not distracted by too much variety.

'The frequency of Gothic towers having been placed at a different angle with the walls of the chapel, must have been more than accident. The position of the tower at Magdalen, with respect to the chapel, is a circumstance of great beauty when seen from the centre of the cloisters, because two sides are shewn in perspective. And upon actual measurement it will be discovered that few quadrangular areas are correctly at right angles.

'And lastly, The effect of perspective, and of viewing the parts of a building in succession, was either studied, or chance has given it a degree of interest, that makes it worthy to be studied: since every part of a building is best seen from certain points of view, and under certain relative circumstances of light, of aspect, of distance, or of comparative size.

'The great scale on which Gothic architecture was generally executed, is one source of the grand impression it makes on the mind, since the most correct model of a cathedral would convey no idea of its grandeur. The false Gothic attempts of our modern villas, offend as much by their littleness as by the general incorrectness of detail.' P. 198.

'A general idea prevails, that in most cases it is better to rebuild than repair a very old house, and the architect often finds less difficulty in making an entire new plan, than in adapting judicious alterations; but if a single fragment remains of the grandeur of former times, whether of a castle, an abbey, or even a house of the date of queen Elizabeth, I cannot too strongly inforce the propriety of preserving the original character of such antiquity, lest every hereditary mansion in the kingdom should dwindle into the insignificance of a modern villa.' P. 202.

The chapter on colours contains some minute observations of importance in the choice of furniture, &c.; with a very ingenious philosophic paper on the colour of shadows, by Mr. Milner. We are sorry that the extent to which discussions of this kind would lead us, prevents our enlarging on it. The subject, also, is only remotely referable to that before us.

On the whole, we have been highly pleased with this work; and, though far from agreeing with our author in all his positions, we think that they all merit strict attention, and an unbiassed examination. So much good sense, such careful and extensive observation, is perspicuous through the whole, that, where we differ, we distrust ourselves, rather than the writer's authority. We ought to add, that our extracts do not afford the most advantageous, or strictly, perhaps, a fair view of the work. The reason is, that many of the most valuable remarks are connected with its plates and descriptions of houses, which we could not render interesting, or often intelligible, without the same assistance. To give this information will, we trust, be alone sufficient to obviate any disadvantage that might otherwise result to the ingenious author from the plan we have been compelled to pursue.

MONTHLY CATALOGUE.

POLITICS.

ART. 13.—*The Parallel between England and Carthage, and between France and Rome, examined. By a Citizen of Dublin.* 8vo. 1s. 6d. Murray. 1803.

WE have not yet seen a more animated or a more able philippic. With all the information which ancient history affords, and with an accuracy and extent of knowledge on this subject which few can boast, 'the citizen of Dublin' examines the foolish bombast of modern Frenchmen, in their comparison of England and France to Carthage and Rome,

'Ut pueris placeant, et *declamatio* fiant.'

He shows, indeed, that France *may* be Rome, as it has been equally deceitful, cruel, and treacherous; but that England cannot be Carthage. In extent of dominion, indeed, in maritime supremacy, the parallel holds; but the government of England is not that of a senate, who can, at the will of one man, refer a question to the people: her battles are not fought by mercenaries; her expeditions are not paralysed by a faction. We cannot give the parallel or the contrast in stronger words than those of our author himself. With these we shall conclude our article.

'France then, in the vices of her policy, resembles Rome; in a want of faith in treaty, and in a sanguinary and unnecessary cruelty in war. In territory and population she is inferior to other European states. Rome had no rival in either. France has a system of policy always fluctuating and governed by faction. Rome always pursued the same plan of policy, though she was governed by annual magistrates. While Rome was spreading her conquests over the world, she was regulated individually by a sense of order, frugality, and morality. France is now practising the vices and the profligacy which sunk the Roman eagles in the dust. Rome in her wars has always been victorious. France in the last 120 years has lost a greater number of battles than she gained, and in almost every war she has been compelled to solicit peace. The impulse of a nation impelled the acts of Rome. The varying, capricious passions of an individual impel the acts of France. In all the points of virtue and of glory the parallel fails on the part of France.

'Carthage is a favourite comparison in the eye of the first consul, because Carthage has been destroyed. But Britain is not like Carthage. We have a constitution and a system of law; a constitution formed by the wisdom of our ancestors, maintained by their valour, and confirmed by their virtue. We have laws made by ourselves, emanating from the general interest and the general will.

We have an executive power, always exerted for the good of the state, and restrained from any impulsion of passion or tyranny that might subvert that state. In those laws the individual interest of every man is vitally concerned, because every individual has contributed to enact them for the security of those interests. With us, no man is the slave of power, but the subject of the law—no mercenary gathers laurels for his chief, but the armed citizen of his country defends its rights.' P. 37.

ART. 14.—*Hints to the People of the United Kingdom, in general, and of North Britain, in particular, on the present important Crisis, and some interesting collateral Subjects. By William Dickson, LL.D.* 8*vo.* 1*s.* Longman *and* Rees. 1803.

Our author, who confessedly drew his first breath on the northern side of the Tweed, calmly displays to north and south Britons the advantages they enjoy in their civil and political state. The remarks are clear and judicious, but neither adduced with spirit, nor in such a popular form as to draw general attention. The author has been disabled in the service of his king and country, and still employs his only remaining efforts in their defence. Both in his views and their execution, he deserves considerable commendation.

ART. 15.—*A Friendly Address to the labouring Part of the Community, concerning the present State of Public Affairs in Church and State.* 8*vo.* 1*s.* 6*d.* Hatchard. 1803.

This very calm, candid, and dispassionate, statement of the advantages which Englishmen enjoy, in climate, in government, and the general benevolence displayed in favour of the poor and the distressed, deserves to be generally dispersed in a smaller form, and perhaps within a shorter compass. Its merits are considerable; nor is there, through the whole, an exceptionable sentence. The little mistakes are of the most pardonable kind.

ART. 16.—*Serious Considerations, addressed to British Labourers and Mechanics, at the present Crisis.* 8*vo.* 6*d.* Debrett. 1803.

These considerations are well adapted to the present crisis. The author calmly and dispassionately explains the necessity of inequality of conditions, from inequality of talent, industry, and strength. He shows, that every able and industrious man may be opulent, and that some of the first families owed their fame to their abilities. We remember having heard an anecdote to this purpose, many years since. A man had risen, from the humble occupation of a carrier, to opulence, and a seat in the house of commons. The wits of the day, when he rose to speak, would whisper, that the bells were jingling; which the graver part of the house repressed, by the cheering encouragement of 'Hear him!—Hear him!' He at last noticed it, and thanked the gentlemen for their kindness; professing, that, to him, it was the highest compliment he could receive. 'I was born and bred a carrier,' added he. 'Were some of these gentlemen in the same situation, I fear they would have been carriers still.'—It was the remark of a man of abilities, who had attentively

examined various countries, that in no place were talents more liberally rewarded than in England; and in no place could a man, who had acquired a fortune, spend it more satisfactorily to himself.

ART. 17.—*Few plain Thoughts from a Well-wisher of his Country.* 8vo. 6d. Debrett. 1803.

An excellent incitement to spirit and unanimity in the present crisis, which deserves to be generally read. Should a Frenchman dare to land, we trust he will be opposed by such a spirit as the author inculcates—ONE HAND and ONE MIND.

RELIGION.

ART. 18.—*Sermons, selected and abridged, chiefly from minor Authors, adapted generally to the Epistle, Gospel, or first Lessons, or to the several Seasons of the Year. For the Use of Families. By the Rev. Samuel Clapham, A. M. &c. Vol. I.* 8vo. 9s. *Boards.* Vernor *and* Hood. 1803.

The sermons in this volume are copied from the following authors—Skelton, Scattergood, Peters, Elsmere, Catcott, Lawson, Richmond, Riddoch, Pearce, Newlin, Goddard, Muscut, Tucker, Gilbert, Powell, Munton, Coneybeare, Brooke, St. John. The attempt to rescue several of these minor writers from the shades of oblivion, is charitable; but it is a proof of the kindness, rather than the discretion, of the collector. His object is to put into the hands of families a volume of discourses which may command the attention of young people, prevent the servants from falling asleep, and keep the reader alive to his office. The only way for the collector to discover whether this object have been accomplished, is to follow the advice which he gives to his brethren of the clergy, whom he recommends to read them in succession after the evening service; and to whom he predicts, in consequence, an immediate and considerable increase in their congregations. In addressing them to his own congregation, let him next mark the passages over which the honest countryman begins to yawn, and himself to feel a degree of wearisomeness; and he will be better prepared for a new edition. As a second volume, moreover, is announced, the same process may be profitably adopted, before it constitute even a first edition. It was with concern we perused the confession of an alarming fact.—'We, the clergy,' says the collector, 'are every day losing members from our communion. Would to God, therefore, the most unwearied exertions may individually be made by all the clergy, from the highest to the lowest, throughout the kingdom, to prevent, if it be possible, this indelible reproach to our church.' To obviate this, it is recommended that there be given, 'in the afternoons, some instruction calculated to inform the understandings, and arrest the attention, of our congregations.' The advice is good; but it is not from the pulpit only, but also in friendly conversation, that this instruction should be communicated. In short, the plan of the enemy, by which the ranks of the church are thinned, should

be observed; and, in this instance at least, *fas est et ab hoste doceri*. The *evangelical* ministers, in many districts, have of late formed themselves into societies, and visited, in turns, the villages in their neighbourhood. A farmer generally accommodates them with a private room; and, at first, their meeting is small: by degrees, however, neighbour drops in after neighbour; they become accustomed to the new mode of preaching; and, from listening with pleasure to a preacher on the week-day, they are led to sit under him on the Sunday, at his market-town. In most parts of England, this plan has of late been adopted with success: the process is slow and silent; and nothing can obviate it, but great energy from the church pulpit, and a great degree of intercourse between the clergyman and his parishioners.

ART. 19.—*The Divine Logos, or Jehovah Elohim the only proper Object of Christian Worship. By John Bentley.* 8vo. 3s. 6d. *Boards.* Hurst. 1803.

The author deprecates the severity of criticism, under whose inspection his work, he thinks, will experience the fate of the partridge in the fraternal embraces of the hawk: we will, therefore, indulge his timidity; commending his uneasiness at attending public worship on Trinity Sunday, and hearing a sermon bordering on indifferentism with respect to the doctrine to which that day is peculiarly dedicated. He is to be praised, also, for reprobating the custom of sitting during prayers—too frequent in many of our churches—and for lamenting the wretched state into which our psalmody is reduced, both with respect to the matter and the manner of its performance. We are fearful, however, that there are too many Hebrew words introduced into this work for the mere English reader to derive much information from it. As the author is an advocate for retaining the spurious verse in the fifth chapter of St. John's Epistle, and asserts that there are manuscripts, which exhibit this verse, older than those which reject it, we should be much obliged to him to name those manuscripts; and, as he professes himself to be a lover of truth, we will wait for his answer till he has read what Newton, Emlyn, Griesbach, Porson, Marsh, and the present bishop of Lincoln, have observed upon this subject. Perhaps there never was an interpolation in any work so clearly and decisively proved as this has been; and we are astonished that any person should make the declaration in print which our author has done, without naming those manuscripts on which he builds his faith. One argument, produced in defence of the controverted passage, is futile beyond measure.

'We cannot suppose that the gracious head of his church, would, for near two thousand years, suffer his faithful people to be imposed upon by an interpolation of such a serious nature.' P. 124.

Does not the author know that the Testaments first printed by Luther and Erasmus were without this spurious passage? and, when it is asserted to be an interpolation, he cannot say that it has been permitted to stand in the Testament nearly two thousand years; for the Greek church was without it for upwards of *fifteen hundred* of those two thousand years.

ART. 20.—*Christ's Warning to the Churches to beware of false Prophets, who come as Wolves in Sheep's Clothing: and the Marks by which they are known. Illustrated in two Discourses. By Joseph Lathrop, D.D. &c.* 12*mo.* 6*d.* No London Bookseller's Name. 1802.

The presbyterian form of church discipline is here vindicated; but some assumptions of the writer seem to militate much against his chief position. He lays it down, as his first maxim, that no one can enter into the ministerial office but in the way that the Gospel prescribes: he allows to each church the 'right to choose her own ministers: but she cannot make a minister; he must be separated to the work by the elders of the churches.' This latter point is proved from the separation of the deacons by the Apostles. Now, if a church cannot make a minister, we would ask how Dr. Lathrop came to be a minister? and he will answer, perhaps, by the separation to the work by certain elders. But how came the elders to possess their authority?—by a similar operation. Was this operation uniformly performed?—by no means. We arrive at a time when these elders received their authority solely from episcopal ordination, or the appointment of a society; and, in either case, the doctor will find it difficult to stand his ground. For, if they had it by episcopal ordination, their episcopal ordination is either of Gospel appointment or not; if not of Gospel authority, then Dr. Lathrop's ministerial character is evidently lost, because they had not the authority to convey a power to his predecessors; and, if episcopal ordination be of Gospel authority, then he has entered into office in a way which the Gospel does not prescribe. The same conclusion follows, if the first elders received their appointment from a church, because he says that a church cannot make a minister. The presbyterian form of discipline is losing ground very much in America; and is likely to be supplanted, as in England, by that of the independents. The true and the false teachers must be distinguished, by those of every sect, by many points properly laid down in this discourse; but the chief article—the mode of acquiring the ministerial character—will be allowed only by one, and that not a very numerous, denomination of Christians.

ART. 21.—*Two Sermons, delivered in the Church of Renfrew, on Thursday, October* 20. 1803. *Being the Day appointed for a general Fast. To which is added, a particular Address to the People, adapted to the present eventful Period. By the Rev. Thomas Burns. Second Edition.* 8*vo.* 6*d.* No London Bookseller's Name. 1803.

These sermons hold a middle place between the religious and the political class: in each view they are commendable; but in neither excellent. The style and manner are calculated for the audience and the place where they were delivered.

ART. 22.—*Honest Apprehensions; or, the unbiassed and sincere Confession of Faith of a plain, honest, Layman.* 8*vo.* 1*s.* 6*d.* White. 1803.

We see no particular advantage to be derived from this confes-

sion of faith. The author is a truly good man; and we trust that there are many (very many) such; but, with respect to the reviewer who is obliged to wade through similar works, we would recommend a change of the title; and that it should be styled '*Honest Anguish.*'

AGRICULTURE.

ART. 23.—*Communications to the Board of Agriculture; on Subjects relative to the Husbandry, and internal Improvement of the Country. Vol. III. Part I.* 4to. 2*l.* 2*s. Boards.* Robinsons. 1802.

The principal part, indeed almost the whole, of this volume consists of hints, essays, and letters, on the conversion of grass-land into tillage. This subject was suggested in consequence of the late dearth; and the committee of the house of lords proposed to the board the consideration of granting permission to tenants to break up grass-land. The best method of effecting this, it was conceived, was to convince landlords that it may be done without injury, and, in many cases, with advantage. Premiums of two and one hundred, of sixty and forty, pounds were offered for the best and the three successive dissertations of different merits.

'It is required that each essay shall fully detail the course of crops, regard being had to the varieties of soil, and the time proposed for continuing the land under tillage.

'Also, to explain the cases in which it may be eligible to drain land, previous to tillage.

'In what cases paring and burning are advantageous, with directions thereon, regard being had to the subsequent cropping.

'The depth to which grass lands should, at first breaking up, be ploughed.

'Whether the crops, intended for cattle and sheep, are to be fed on the land, and by which kind of stock, or carted off.

'To state—

'The crop with which the grass seeds, in each case, ought to be sown, when the land shall be again laid down:

'The sorts and quantities of grass seeds for each kind of soil, and whether to be provided by landlord, or tenant:

'Whether it be best to mow or feed the grass in the first year after laying down—to detail the management in each case:

'The manuring which may be thought necessary:

'The principle on which an increase of rent ought to be estimated, where permission may be given to break up old pasture now under lease.

'The board requires that these objects should be particularly attended to, with relation to the leading qualities of land, viz.

'Clay, in all its distinctions; and soils too strong or wet for turnips:

'Loam, in all its distinctions, fit for turnips:

'Sand, including warrens and heaths, as well as rich sands:

'Chalk-land, and downs:

'Peat, including moory, sedgy, rough bottoms, and fens.' Vol. iii. p. 2.

The communications in the present volume were written in consequence of the notice, though not as contending for the premiums. Many of them are able performances, and show, not only the means of effecting the conversion, but the methods of recovering the lands from the state of tillage; together with the advantages to be derived from the change. We cannot properly appreciate the merit of the different essays in this place. They all show the utility of the measure, in given circumstances: but we think it cannot be established generally.

ART. 24.—*An Essay on the Conversion of Soils; Part of which has been submitted to the Honourable Board of Agriculture: together with some Observations and Remarks on the Breeding of Sheep and Cattle. By Henry Hoyte.* 4to. 2s. 6d. Kirby. 1802.

This little essay is the work of an intelligent agriculturist, and relates to the changes, occasionally necessary, from pasture to arable, and the contrary. Many judicious agricultural remarks are interspersed; and the whole merits our commendation.

MEDICINE.

ART. 25.—*The Domestic Medical Guide; or, complete Companion to the Family Medicine Chest. Comprising in Addition to the former Edition, the Management of Children, Treatment of Poisons, Recovery of drowned Persons, Method of destroying Contagion by Fumigation, with a more copious Account of Diseases, and the most rational Mode of Treatment, &c. By Richard Reece, &c.* 8vo. 6s. *Boards.* Highley. 1803.

The refinements of modern therapeutics would excite the astonishment of Sydenham or Friend; but, while confined to an anxiety of procuring medicines in their best state, and uniting them in the most pleasing formulæ, they are not only innocent but beneficial. When they extend to an apprehension of displeasing by the taste, and incommoding by their operation—when designed to amuse, with little chance of benefit—they become highly injurious. In the former view, this work merits our commendation. The medicines are of the best kind, prepared with the most anxious care; the doses, somewhat above the usual standard, rather than insignificant; and the compounds, neat and chemical. An eighth of an adult dose, for children of one year, is too great; and, in more than one instance, we think the doses too liberal. The essences prepared like the essence of peppermint, and the essential salt of bark, are, very properly, introduced into domestic medicine.

At this point, our praise must end; for domestic medicine is, we know, highly injurious. A name being once given to a complaint, any nurse can prescribe for its cure. But diseases attack insidiously. They assume forms, at first, very distant from their real nature; and medicines, adapted to these first appearances, may be sometimes fatal. Diseases, also, will not submit to systems; there are many to which no name can be assigned; and others, that can be referred to a name, that will not bear the usual treatment assigned to such name. Independently of these considerations, in this work

the most active medicines are put into the hands of an inexperienced person, with few, if any, cautions. Calomel, gamboge, antimonial powder, and laudanum, are ordered with great freedom; and, in the practice subjoined, medicines of still ampler power are pointed out. This we conceive highly dangerous; nor would we add, to any family chest, more than the common evacuants of the mildest kind, the common cordials, and the less heating sudorifics.

ART. 26.—*A Treatise on the Structure, Economy, and Diseases of the Liver; together with an Inquiry into the Properties and Component Parts of the Bile and Biliary Concretions. By William Saunders, M.D. F.R.S. & S.A. &c. Third Addition. With Additions and Improvements.* 8vo. 7s. *Boards.* Phillips. 1803.

Having fully considered this work on its first appearance *, we should not have noticed this third edition, if it had not contained some new observations.

In the preface, the author enlarges, with a little too much ostentation, on the common ideas of the importance of the liver, and its extensive connexions: he adds, moreover, as well from his own experience as that of others, that he is more fully convinced of the propriety of the antiphlogistic treatment in the early stages of hepatitis, previous to the use of mercury. Dropsy, too, he considers as depending frequently on the morbid state of the liver, and, consequently, in nearly the same light. It wanted not any very minute or deep observations to show the connexion of dropsy with diseased liver; but it wanted, perhaps, some strong authority to counteract Dr. G. Fordyce's prejudices against purging in dropsy. Dr. Saunders's observations will, we trust, in this view, be advantageous.

Our author's remarks on the use of Cheltenham water are apparently judicious and correct. The newly-discovered mineral spring will probably be beneficial in counteracting the too powerful laxative effects of the waters generally employed. As Dr. Saunders seems to promise some further observations on the subject, we shall not now enlarge on it. On the whole, we think this one of the most valuable treatises on the liver and its complaints that we possess in our language.

POETRY.

ART. 27.—*Æsop's Fables, new versified, from the best English Editions. In three Parts. By H. Steers, Gent.* 8vo. 5s. *sewed.* Harris. 1803.

In the year 1773, a good translation of the fables of Lessing, by J. Richardson, was printed at York: unfortunately it does not include the masterly dissertation on the theory of fable-writing prefixed to the German original. Had it done so, our poets would, by this time, have been aware that the object of a fable is not to afford precise and picturesque descriptions of animals, such as a naturalist might be proud to avow, but to deliver, in the most concise possible form, some lesson of ethic experience. Animals are called in emblematically: they represent classes of human charac-

* Crit. Rev. Second Series, Vol. 10. p. 127.

ter: the fox is substituted to the cunning man, the hare to the timid; and the use of the substitution consists in the total abstraction of all dramatic peculiarity in the delineation of general nature, which is suited to all analogous cases, rather than of individual personality, which is of more limited, though of more precise, application.

Inattentive to this convincing observation, our author, like Phædrus and Lafontaine, digresses perpetually into descriptions, which neither account for, nor belong to, the anecdote related. Let us take the first fable to analyse.

'A cock at early dawn of day
Awoke, his oraisons to pay,
And sliding down from partlett's side,
Crow'd shrill, and strutted far and wide;
'Till o'er his wonted dunghill mounted,
He on a splendid breakfast counted:
Such, by the sun's new burnish'd rays,
He spied fresh kindling in the blaze;
But, cruel fate! his beak was bone,
And of hard adamant the stone:
Then spurning Sol's bright cousin-germin,
"Enrich," he cried, "base human vermin;
One corn of barley to my mind
Is worth ten millions of thy kind." P. 2.

What matters it to the reader, or applier of this fable, whether the cock awoke early, whether he said his prayers, whether he quitted the side of his spouse, whether he crowed or strutted? That he wanted a breakfast, is to the purpose; that he hoped for the better morsel, because it glittered, is improbable; that his beak was bone, would have been equally true, if he had found a barley-corn; that what he found would enrich men, is an admission which defeats its purpose; and the whole inference—but this is Æsop's fault—is, that the cock was a bad judge of merit.

So much for the matter, thought, or idea: now for the form, dress, or style.

The epithets are merely such, as, in a former article, we termed *splines*. Every dawn is early; every crowing, shrill; every ray, new burnished; every kindling, fresh; every adamant, hard; every cousin to Sol, bright, &c: so that not an epithet tells. *Wonted* is bad grammar: the old infinitive is *to wone*, and the participle *woned* or *wont*. *Germin* is bad spelling, voluntarily substituted to *german*, for the sake of riming to the eye. The descriptive passages are unlucky: cocks do not *slide;* when they strut *far and wide*, they quit their *wont* dunghill: they never count on a *splendid* breakfast: they do not *spy*, for they see very readily. It is no *cruel* fate that a cock's beak is bone, or that a stone is adamant. Who spurns any thing, *because* it resembles the sun? or peculiarises those men as *base vermin*, who are rich? In short, the diction is remarkable for infelicity and impropriety.

Our readers will not exact that we should examine, in similar detail, the whole hundred fables: any prose translation of them merits preference.

ART. 28.—*The Evils and Advantages of Genius contrasted: a poetical Essay, in three Cantos. By the Rev. William Tindal, A.M. F.S.A.* 8vo. Richardson. 1803.

Didactic poetry is seldom good for much. The art of legislating, or reducing to rule the precepts and general principles of taste, science, or morals, so as to form a directory of practical wisdom, requires philosophy and precision. But philosophy, or the abstract expression of general truth, is the form of expression, of all others, most opposite to the poetical, which requires sensible imagery and individual exemplification. Precision is attainable by the skilful versifier; but where only one epithet is the correct, it is in great danger of being sacrificed to the metre, the rime, or the sound. Pope, who excels all other didactic poets, abounds with lines which have the mere merit of condensation, and are wholly devoid of metaphor, imagery, tropes, colours, or any pretensions to poetry. Akenside, a popular didactic poet, whose subject was fortunate, and whose metre imposed little restraint, has many nonsense-verses, incapable of any rational translation, where the want of meaning is concealed beneath smooth and pretty words. It is with Akenside that the author of this poem enters into competition; for their subjects are in fact the same; the pleasures and pains of the imagination being those advantages and evils of genius here discussed. The manner of Cowper has been chosen by this writer: he owes less to books, less to the Greek and Latin classics, less to the moralists, than Akenside; and more to domestic nature, to local scenery, to familiar manners, and to English feeling. He wants selection, too, like Cowper, in his choice of images; and he paints with a less vivid and animated pencil. A passage from the third canto—

> 'Here let me to th'excursive mind, sublim'd
> By genius, offer its due praise: 'tis still
> The friend of virtue and of moral worth.
> Whate'er its devious eccentricities,
> Its trembling variations, to the pole
> Of justice, honour, truth, invariably,
> It turns at last. Though oft, full oft,
> With frame of body and of mind endow'd,
> Susceptible of passion's fiercest storms;
> Though from the narrow path of onward life
> It chance to deviate, and to snatch a flow'r
> From the parterres of vice, 'tis still oppos'd
> By natural bias, acts against its force;
> And, after such sad trial, back returns
> The firmer friend of pure morality.
> 'Tis even its criterion. Shew me one
> Entitled to its praise who e'er sat down,
> With cool resolve, to chaunt the praise of vice
> Or to describe its pleasures, and I yield
> The point:—but, there is no one; he who can
> Is neither Virtue's friend nor Genius' son.
> —Who shall decide but some identity
> May lurk, yet undiscover'd, in the sense
> Approving moral action, and, in that,

Exciting love,—pure, undissembled, love,—
Of beauteous Nature and her copied charms;
And, as between the sense imparting power
To judge of odours, and the palate's nice
Discrimination, there is somewhat more
Than mere analogy. A scene of soft,
Calm, past'ral, life, may vibrate on the chords
That mild benevolence would touch: a grand
Tremendous image may arouse the soul,
As universal love, heroic acts,
Disinterested kindness, on the mind
Seise irresistible:—the sense, perhaps,
The same, with diff'rent energies endowed.
—Howe'er we deem of this, example shews
A mind susceptible of one will scarce
Neglect the other.—'Tis enough to touch
The subject:—what philosophers have wav'd
Or treated doubtful, 'tis a poet's task
To skim o'er lightly, well content to prove
The love of virtue ever Genius' praise.' P. 41.

These lines will probably be classed rather with the flatteries *to*, than *of* genius; yet they display, in common with the rest of the poem, a mind which relishes warmly the fair and the good, and which is baptised with the Divine Spirit, if not with the fire of poetry.

ART. 29.—*Terrible Tractoration!! A poetical Petition against Galvanising Trumpery, and the Perkinistic Institution. In four Cantos. Most respectfully addressed to the Royal College of Physicians. By Christopher Caustic, M.D. LL.D. ASS. &c. Second Edition, with great Additions.* 8vo. 4s. 6d. *Boards.* Hurst. 1803.

In the second edition of this work, the object of the author is more conspicuous: indeed it blazes with a lustre that leaves not the smallest foundation for doubt; and, not confining himself to the tractors, like sir John Hill, of redoubtable memory, he aims his blows at many absurdities in the philosophy of medicine. Such in fact there are; and ridicule is, perhaps, the only weapon with which they can be attacked. Our author applies his flagellation with no sparing hand; and, while we laugh at his wit, we feel some little pain for the effects of his severity. We would suggest only, in the words of Yorick,—While you tear the jerkin, may you not injure the lining? While you lash the weakness, may you not give pain to a respectable mind? The deprecation of severity, from a reviewer, may be thought like a lecture of humanity from an inquisitor. Yet, if persons can know their own hearts, we may truly say—

'Curst be the line, how well soe'er it flow,
That tends to make one *honest man* our foe;'

and can add, in the words of the same poet, slightly changed—

'Critics lose half the fame they might have got,
Were it but known what they *humanely* blot.'

ART. 30.—*The Works of the English Poets. With Prefaces, biographical and critical. By Samuel Johnson, LL. D. Re-edited, with new biographical and critical Matter, by J. Aikin, M. D. Vols. VII. VIII. IX.* 12*mo. Small Paper* 1*l.* 1*s. Large Paper* 1*l.* 16*s. Boards.* Kearsley. 1802.

We now announce the continuation of this publication, with the three volumes which contain the poems of Cowley. The life of Cowley has, however, been written with such critical discrimination, such ability, and judgement, by Johnson, that the editor has little subject for remark. He objects, with some reason, to the term *metaphysical* poets, because their metaphors or resemblances are not exclusively intellectual. Though Johnson defends Cowley from the attack of a critic who censured him for 'profane and lascivious verses,' yet, in another passage, he condemns the poet for light allusions to sacred things.

'The sentence Dr. Johnson has pronounced concerning the unfitness of scripture subjects for poetical embellishment, on account of the awe and submissive reverence with which the sacred writings are perused, seems rather to be dictated by the spirit of scrupulous and mistaken piety, than by just and philosophical thinking. It evidently adopts for its principle the notion of the full and equal divine inspiration of every part of the writings composing the canon of scripture, whether historical, perspective, or prophetic;—a notion which few men of learning and liberal inquiry can now be supposed to hold. That all curiosity respecting these topics is suppressed, because there is already what is "sufficient for the purposes of religion," is surely a very singular and narrow sentiment. Who would not rejoice at the recovery of some of those historical records which are expressly mentioned as containing at large, facts only given in abridgment by the extant Jewish writers? And what reader of the Bible, not destitute of common feeling, will concur in the critic's assertion, that the effect of the *theocratical* system is to prevent us from readily sympathising in the joys and griefs of those who lived under it? That mind must indeed be strangely impressed with the character of theocracy, which is rendered incapable of being interested by the *natural* circumstances in the adventures of Joseph or David. That the intermixture of poetical fiction in such narrations is a matter of much delicacy, will readily be acknowledged; since if the additions are not perfectly conformable to the original ground-work, they will prove offensive to those who are firm believers in the authenticity and importance of the scriptural records. But there seems no reason why the amplifications and ornaments usual in sober epick poetry should not be as admissible in a subject of Jewish history, as in one of any other. Dr. Johnson was not, perhaps, aware at the time of writing, what a sweeping clause in critical legislation he was propounding, and how many fine works were involved in his condemnation. The particular merit of the "Davideis" is quite another consideration; and it appears to have been estimated by the critic with his usual perspicacity. Cowley's genius was, indeed, altogether unsuitable to the epick. His place is among the *ingenious* poets, and he may justly rank the first in his class.' Vol. vii. p. cii.

We have transcribed this passage, lest we should lessen the force

of the reply; yet we own that it is not to us satisfactory. There is no scale to measure the degree of divine inspiration; and, in narratives purely historic, the interposition of divinity occurs; and, to extend the licence, might endanger that respectful distance at which sacred subjects should ever be contemplated. Even the language of the Scriptures hedges them around with reverential archaisms, which should not be lightly withdrawn, or employed for other purposes.

The engravings are executed with elegance, from drawings distinguished by spirit and taste. In one or two instances, the choice is not entitled to much praise; and, in another, the Pegasus is not brought sufficiently forward to illustrate the quotation. The Muse has alighted *from* Pegasus, when the poet exclaims—

> 'Stop! stop my Muse! allay thy vigorous heat,
> Kindled at a hint so great:
> Hold thy Pindaric Pegasus closely in,
> Which does to rage begin, &c.'

DRAMA.

ART. 31.—*The Wife of two Husbands, a Musical Drama, in three Acts. As performed at the Theatre-Royal, Drury-Lane. By James Cobb. The Music composed and selected by J. Mazzinghi.* 8vo. 2*s.* 6*d.* Robinsons. 1803.

Mr. Cobb has taken this drama from a piece of Pixerècourt, lately represented with some success at Paris.

The heroine of the play is prevailed upon, by the fascinating manner of a young villain, to espouse him unknown to her father. Here, by the way, we will just notice, that, if we had time or inclination for the pursuit, we should, most likely, find M. Pixerècourt indebted to one of the German dramatists for his model; for this father, notwithstanding his child was but fifteen when she contracted the marriage, and though she continues afterwards unceasingly to supplicate his pardon, pours upon her head, till within two or three sentences of the conclusion of the piece, the curses of *unrestrained* anger, in a style of vehemence equal to Schiller or Kotzebue. We do not, however, mean by this remark to imply that the little performance before us is destitute of all merit, or filled with Germaz inanity. Here is no rant of passion to vindicate concubinage, nor happiness bestowed on a profligate adulterer. The heart feels interested in the fate of a woman, who, for one venial trespass, committed when a mere child, is agonising under the displeasure of a too-unforgiving parent, and subjected to the injurious treatment of him who seduced her from her filial obligations. When several years had elapsed after this fatal union, the greater part of which she had spent in absence, through the ill usage of her tyrant, that abandoned man deceives her into a marriage with an amiable nobleman, by means of counterfeit attestations of his own death, in order to make a prey of the property of this second husband. Shortly after this epoch, the scene opens; and, from the circumstance of the latter marriage, M. Pixerècourt has bestowed on his heroine her title, 'La Femme à deux Maris.'

The translator has thought it necessary to make some alterations; yet these, we do not hesitate to say, have not improved the original. No British bosom, at this important moment, can avoid beaming

with loyalty to his sovereign, and enthusiastic love for his country. But to introduce an Irish soldier, and an English sailor, amongst the dependents of a Sicilian, in order to make them sing 'Hearts of Oak are our Ships,' and teach the peasants to dance, is trifling and preposterous. The sentiments, in general, are noble and well expressed. Mr. Cobb has been careful not to let them fall off in his English version.

ART. 32.—*The Caravan; or, the Driver and his Dog. A grand serio-comic Romance, in two Acts. Written by Frederic Reynolds. The Music by William Reeve.* 8vo. 2s. Robinsons. 1803.

To try a production like this by the rules of dramatic criticism, would be to treat its author severely indeed. If the nation choose to be pleased by a representation of ballets and pantomimes, the Caravan is as well calculated for that purpose, as Blue Beard, Cinderella, or any other of this description of scenic pageantry.

NOVELS, &c.

ART. 33.—*Letters from Mrs. Palmerstone to her Daughter; inculcating Morality by entertaining Narratives. By Mrs. Hunter, of Norwich.* 3 *Vols.* 8vo. 15s. *Boards.* Longman *and* Rees. 1803.

These volumes merit our warm commendation, since they amuse the fancy, while they amend the heart. The instructions precede the tale, a method not without its use, since the moral, *appended* to the story, is, we fear, often passed over. In this instance, expectation is kept alive, and the young mind is led to the temple, through an amusing portico. Our author's own object is evinced by the observations of her friend in the introduction; since, to the *desideratum* thus explained, she replies by offering her packet, the contents to the volume before us.

'He said he wanted books for his female pupils, and particularly for those between twelve and seventeen years of age. I instantly reminded him of the numberless and excellent works published for the express purposes of instruction to young people; and with some asperity, I believe, and perhaps national pride, named several authors who had a distinguished claim to his selection and preference. He replied, "He was well acquainted with the books which I had enumerated: he acknowledged their merit, and had availed himself of their usefulness. But," added he, smiling, "some are too serious, and others too childish: some say too much, and others not enough. I want a delineation of the human heart, with a moral which will not disgrace a mature reason. I want a mirror of truth and of nature, in which my girls may see themselves without danger to their native simplicity, and without checking too harshly their natural curiosity and fancy." Vol. i. P. xi.

We had marked some of the letters as peculiarly interesting and instructive; but, on the whole, we are unwilling to discriminate where all have merit. Perhaps 'Beauty and Ugliness, or the Sick Child,' affords one of the most salutary lessons for the conduct of young people; while Amelia Saville points out a path particularly destructive even to present happiness. To have enforced the moral, she should have been more generally known and despised, as she truly merited to be. Mrs. Hunter has, we think, not succeeded so well in her Eastern and Allegoric Tales.

ART. 34.—*The Cave of Consenza: a Romance of the eighteenth Century. Altered from the Italian. By Eliza Muscat Bromley. 2 Vols. 12mo. 12s. Boards.* Robinsons. 1803.

There are some circumstances relating to this publication that might disarm criticism, even were the faults more numerous. The work is said to be altered from the Italian; and there is seemingly an incongruous mixture of the English and Italian stories. The latter is in the usual style of caves, banditti, strong holds, &c. The whole, however, is interesting, and, notwithstanding numerous violations of probability, pleasing. The moral we do not think unexceptionable. The heedless attachment of a young girl of seventeen to a *married* man of forty, and the death of an amiable woman, to make way for their union, will lead rather to the indulgence of such transient fancies than to the necessity of opposing them. Every wife will not die with so much complaisance; and every love-sick girl will not be so fortunate.

ART. 35.—*Moss Cliff Abbey; or, the Sepulchral Harmonist. A mysterious Tale. By Mary-Julia Young. 4 Vols. 12mo. 12s. Boards.* Crosby *and* Co. 1803.

In the days of Curl, a 'taking title' was as fashionable as at present; and we augur well of the success of the *Sepulchral Harmonist*, in these days when ghosts and mysteries are so fashionable. The novel, though abounding with events scarcely within the verge of probability, is interesting, from its frequent and sudden changes of fortune: the characters, however, are in no respect new, and merely captivate from their situation; and, while we 'incredulously hate' the unexpected alternations of misery and happiness, disapprobation vanishes, in our eagerness to follow the events.—We have laughed a little at the ghost of an opera tune; but this is the ghost of an elegy; and the poetry is wild and 'full of fantasy,' well adapted to the situation. The Booth and Amelia of Fielding seem to have been in Miss Young's view, when she sketched George and Harriet Newton.

MISCELLANEOUS LIST.

ART. 36.—*Book-keeping improved: or, a certain Method laid down and exemplified for the Detection and Prevention of Errors: entirely superseding the tedious Process of calling the Books over. By Philip Pullen. 4to. 1l. 1s. Boards.* No Bookseller's Name. 1803.

An improvement is here made in the journal, by an additional column, to receive the folio numbers of the several debits and credits posted in the account-current-book. The totals are collected at the bottom of the column, and carried forward; by which means a counter-check is obtained on the addition of every entry. The ledger is not altered. In the account-current-book every item is posted as fully as possible. The several amounts in the journal are entered in the inner cash column, and the total amount carried to the outer cash column, that the respective sums posted in the ledger may correspond, and act as a check on the amounts posted in this book. To these is added a book of partial balance, as an auxiliary to the general balance. The respective amounts posted in the debit and credit of the several accounts in the ledger during each month, being compared with the journal amount for such month, prove

that the sums have been either correctly, or incorrectly, posted. If there be an error, it is detected by a comparison of the partial balance with the account-current-book. Thus the books may be correctly balanced every month without calling the books over. The improvements here suggested merit the consideration of the merchant.

ART. 37.—*Thoughts on the Doctrine of vicarious Suffering, occasioned by some Reflexions on the Bishop of London's Lectures in the Monthly Review for December*, 1802. 8vo. 1s. 6d. Baldwin. 1803.

That man would have remained in the state of death, if 'it had not been for the mediation of the Gospel covenant,' is a truth to which all Christians give their ready assent. On the operation and nature of that covenant, many disputes have arisen; and our author treats the subject rather inaccurately, when he concludes, that 'some satisfaction was provided to stay divine justice from the vindictive execution of that fatal sentence which man had incurred by transgression.' No satisfaction was provided to stay divine justice; for divine justice took its course, and man was punished in the way prescribed by the law: he died for his transgression, and all his offspring became, in consequence, subjected to death. To recover man from this state of death, a sacrifice must be made, according to our author, to divine justice; but a sacrifice is intended to expiate guilt, and to preclude the vindictive effects of justice: now nothing has prevented the effect of the primal sentence passed upon man; and his restoration to life becomes the subject of a different inquiry. We here read much of sacrifices; and the sacrifice of Christ cannot, it is said, be considered as alluding to Mosaical sacrifices; that the sacrifices under the Mosaical rites were real; and that that of our Saviour can only be considered in a figurative sense—for his death was that of a malefactor. Hence the figurative expressions of Scripture are naturally much tortured by our author, and the plain evident meaning of Scripture is lost in refined discussions. The disobedience of Adam was the mean by which death entered into the world—the obedience of Christ was the mean by which man receives the gift of eternal life. In a controversy of this kind, it would be well to use the precise language of the Scriptures: in them we shall neither find the term *satisfaction* applied to Christ's death, nor shall we meet with any term that expresses *vicarious suffering*. However, we will abstain from further remarks, lest the irritable author should involve us in similar censures to those he has bestowed on our brother reviewers.

CORRESPONDENCE.

We are much obliged to 'our sincere well-wisher SENEX' for his past attentions, and shall be glad to gratify his expectations in future. In respect, however, to his observations concerning the article on THALABA, it is impossible for us to reply satisfactorily, without a distinct statement of his objections to the critique it contains. Whatever exception may have been taken to it by *Senex*, the writer of that article, we have no doubt, would readily remove; and, we have the satisfaction to add, that, though it has not the good fortune entirely to please 'our sincere well-wisher,' it has been complimented from other quarters in a style highly gratifying to its author.

We will beg leave to remind SENEX that it is usual to pay the postage of communications like his.